

# THIRTY-THIRD ANNUAL REPORT

OF THE

# DEPARTMENT OF MARINE AND FISHERIES

1900

# M A R I N E

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O T T A W A

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EXCELLENT MAJESTY

1901







*To His Excellency the Right Honourable SIR GILBERT JOHN ELLIOT, EARL OF MINTO,  
Governor General of Canada, etc., etc.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Third Annual Report of the Department of Marine and Fisheries, Marine Branch.

I have the honour to be,

Your Excellency's most obedient servant,

LOUIS HENRY DAVIES,

*Minister of Marine and Fisheries.*

DEPARTMENT OF MARINE AND FISHERIES,

OTTAWA, December 31, 1900.



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Your obedient servant,

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Director of the University Library

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## PART I.

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CHIEF ENGINEER IN DETAIL RELATING TO CONSTRUCTION  
AND REPAIRS TO LIGHTHOUSES, HYDROGRAPHIC  
SURVEY AND TIDAL SURVEY.







## REPORT OF THE DEPUTY MINISTER.

To the Honourable

SIR LOUIS H. DAVIES, K.C.M.G., &c.,  
Minister of Marine and Fisheries.

SIR,—I have the honour to report on the transactions of the Marine Branch of this department for the fiscal year ended June 30 last, and to give an account of a portion of the business up to date.

In Part I. of this report will be found the detailed report of the chief engineer on Construction and Maintenance of Lighthouses and other aids to navigation, and references to the reports of the chairman of the Board of Steamboat Inspection, Chairman of the Board of Examiners of Masters and Mates, the inspectors of Live Stock Shipments, the director of the Meteorological and Magnetic Service, the inspector of Signal Service, and the reports on Life-Boat Stations and Rewards for Humane Service.

A short account of the work of the Dominion steamers is given and the expenditure in connection therewith, the buoyage of the coast, harbours and inland waters, the purchase of oil for the use of lighthouses, the marine hospitals in the Dominion, certificates to masters and mates, wrecks and casualties.

In Part II. the reports from which the synopses have been made will be found *in extenso*, also statements of expenditure, revenue, sick mariners dues, wharfage, wrecks and casualties, steamboat inspection, and a list of light-keepers.

The amount expended on the various branches of the public service comprised in the Marine Branch of this department, during the fiscal year ended June 30 last, was \$919,616.94 ; the expenditure for the previous year was \$1,020,259.93. The expenditure for civil government, including the Marine and Fisheries branches amounted to \$54,368.71, and for civil government contingencies \$8,962.60.

The amount voted by parliament for the different branches of the Department of Marine and Fisheries, not including the departmental salaries, was \$951,626.41. It will thus be seen that the expenditure for the fiscal year was \$32,009.47 less than the amount voted by Parliament.

The whole number of persons in the outside service of the Marine Branch at the date of this report is 1,910.

During the past fiscal year the expenditure for maintenance of lighthouse and coast service amounted to \$456,254.48 ; construction, \$60,239.92 ; total for maintenance and construction \$516,494.40 ; while for the previous year the expenditure for the lighthouse and coast service, including construction was \$537,457.56 ; showing a decrease of expenditure for the year ending June 30, last, of \$20,963.16.

The appropriation for this service was \$533,458.87, the expenditure being \$16,964.47 less than the appropriation of parliament for the fiscal year.



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## LIGHTHOUSE SERVICE.

The lighthouse service of the Dominion is divided as follows:—The Ontario division, embracing all lights from Montreal westward to the North-west Territories; the Quebec division extending below Montreal and including the river and gulf of St. Lawrence and strait of Belle-Isle; the Nova Scotia division including St. Paul's Island, Cape Breton, Sable Island and Cape Race, Newfoundland; the New Brunswick division; the Prince Edward Island division and the British Columbia division, each including lights within the provincial boundaries. The total number of light stations, light-ships and fog alarm stations in the Dominion on June 30, 1900, was 693, and lights shown 869; the number of steam whistles and fog-horns, bells and guns 88; the number of light-keepers and engineers of fog alarms with masters of light-ships was 693.

The report of the chief engineer relating to light-house construction, repairs, hydrographic and tidal surveys, &c., will be found in part I. The principal repairs, changes and improvements at existing stations are referred to in his report, also new aids to navigation. The work done at fog alarm stations in connection with steam whistles, compressed air horns and explosives, are dealt with under their proper headings. Information is also given respecting the extent of repairs and some account of the repairs in detail, under the head of the station.

## CORRESPONDENCE.

The correspondence branch of the department is under the control of Mr. John Hardie, chief clerk of the department. About 17,103 letters, exclusive of telegrams, were received in the department during the fiscal year. The correspondence was carefully examined and replied to as far as necessary. About 14,000 letters were sent out during the same period. Forms, reports, circular letters, notices inviting tenders are not included in the number of letters addressed to this department or sent out.

These forms, &c., are numerous, and require special attention, as the matters to which they refer are important.

In the Records Branch of the department the letters received are carefully examined, entered in the record book, placed on file, and the copy of the reply attached, so that the letters and the answers can readily be seen, and any subject easily followed up.

## MERCHANT SHIPPING.

Reports relating to merchant shipping for the calendar year of 1900 have not been received from the registrars of shipping in the various ports of the Dominion. The reports are made up to the end of the calendar year, and therefore, will not be received until some time after the month of January, as provided by the Canadian Shipping Act.

The statements showing the number of vessels on the registry books of the Dominion December 31, 1900, will appear in supplement No. 1 of this report. The number of new vessels built and registered will also be shown, and also a comparative statement of the tonnage of new vessels built and registered from 1874 to 1900, both inclusive.



## SESSIONAL PAPER No. 21

Mr. W. L. Magee, chief clerk, attends to all matters in connection with merchant shipping.

## BUOYS AND BEACONS.

The extended coast line of Canada, and numerous bays, inlets, rivers, lakes, harbours, and other navigable waters require a large number of buoys, which are maintained at an average cost of \$55,000 per annum. For the fiscal year ending June 30 last, the service cost \$66,980,48. The cost of this service is increased in years when new contracts are given for steel signal and other coast buoys.

The chief engineer in his report relating to buoyage, points out that the department has been substituting steel coast buoys for wooden buoys with favourable results. The districts now buoyed in all parts of the Dominion, number over three hundred, and the buoys number over three thousand. A record of the names of shoals, dangers, reefs and various points in channels, harbours, &c., where the buoys are placed, is carefully maintained; this enables the department to immediately locate the buoys when any reference is made to them in the correspondence.

The contract system has been found to work most economically and efficiently; in the majority of instances the contracts are immediately under the supervision of departmental officers, whose duty it is to report to the department any neglect of work on the part of the contractors. There are now existing about 275 contracts, some of which will shortly expire but new contracts will be entered into in the spring. The contractors are paid semi-annually upon the certificate of the superintending officer. There are, however, some districts not under contract; the work is being attended to by the harbour masters. In these cases it has been found more advantageous to place the work immediately in the hands of these officers.

A large number of whistling, bell and other iron buoys are maintained along the coasts of the several provinces by Dominion steamers, particularly the Nova Scotia, New Brunswick and British Columbia coasts. The cost of this maintenance by the steamers is not charged directly to the buoy service, but is included in the cost of maintenance of steamers which frequently perform the double duty of attending to lighthouses and the coast buoy service on the same trip.

The expenditure in connection with the buoy service for the year ended June 30, 1900, was as follows:—

For the province of Quebec, including the port of	
Montreal.....	\$ 30,527 61
Above Montreal, including Ontario.....	7,489 58
Nova Scotia.....	11,067 28
New Brunswick.....	9,390 82
British Columbia.....	6,111 60
Prince Edward Island.....	2,393 59
Total.....	\$ 66,980 48

In addition to the buoys for marking dangers, there are eleven gas buoys below Quebec and one spare buoy, also gas works and supply tanks, &c. Two gas buoys are maintained in Pelee Passage, Lake Erie, and three in Parry Sound, Ontario. All of these buoys assist vessels at night by their light.



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The steam barge *Shamrock*, built in 1898, was engaged in the buoy service in the ship channel between Montreal and Quebec, and was immediately under directions from the department in carrying out the work of buoying the channel. The buoys were increased in number and various changes and improvements were made, especially in the stretches of the dredged channel improved by the Public Works Department. The changes are referred to in detail in the report of the chief engineer of this department.

Tenders were invited and contracts entered into for the following steel buoys during the year, viz., three whistling buoys, two bell buoys, four conical buoys and nine can buoys for the Nova Scotia agency; eighteen conical buoys for the New Brunswick agency, and two conical buoys for the Quebec agency.

### OIL FOR USE OF LIGHTHOUSES.

The contract for supplying lighthouse oil was carried out by the Imperial Oil Company, of Sarnia, for the season of 1900.

The specification upon which tenders were invited requires the oil to weigh at 62° Fahr., not less than 7.85, nor more than 8.20 lbs. per gallon, and to withstand a flash test of 115° Fahr.

The quantity of oil supplied lights above Montreal during the season of 1900, was 22,545.77 gallons imperial measure, which cost \$3,846.92; to the lights in the Quebec district, 26,488 gallons, which cost \$1,429.67; to the lights in the Nova Scotia district, 31,296.18 gallons, which cost \$6,650.44; to the New Brunswick district, 10,000 gallons, costing \$2,125; to the Prince Edward Island district, 4,170 gallons, costing \$917.40.

In addition to this the department purchased from the Standard Oil Co., of New York, 7,000 gallons of American oil for the Nova Scotia district, at a cost of 17½ cents a gallon in New York; for New Brunswick, 4,500 gallons at 17½ cents a gallon; for the district above Montreal, 1,150 gallons at the same price in New York. The freight was paid by the department. In addition to this, 7,000 gallons of American oil was purchased for the British Columbia district at 21½ cents per gallon.

The list of prices according to contract is as follows:—

Delivered at.	Per gall. in barrels.	Per gall. in case.
	Cts.	Cts.
Sarnia.....	14½	19
Hamilton.....	15	19½
Kingston.....	15½	20
Montreal.....	16	20½
Quebec.....	16½	21½
St. John, N.B.....	16½	21½
Pictou, N.S.....	16½	21½
Halifax, N.S.....	16½	21½
Charlottetown, P.E.I.....	17½	22

### DOMINION STEAMERS.

#### 'NEWFIELD.'

The *Newfield* is an iron steamer, commanded by Captain John H. Campbell, and has a crew of thirty-three men. Her dimensions are: length, 206 feet; breadth, 29 feet; depth of hold, 16 feet; tonnage, 785 gross and 509 registered.



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The steamer *Newfield* was engaged in landing coal and building materials at stations between Canso and Halifax from the 1st to the 4th of July. Stores and lamps were then taken on board, and she proceeded to Egg Island and put in operation a new light, the old one having been destroyed by fire.

A trip was then made in the lighthouse and buoy service along the east coast of Nova Scotia, Cape Breton and to Sable Island. Passengers and ponies were brought to Halifax on the return trip. A supply of coal and a steam fog-alarm boiler were then taken to Cross Island, and the ship returned to Halifax on July 30.

The *Newfield* was prepared for cable work, in which service she continued until November 8. The cable gear was then landed and the lighthouse and buoy work again taken up.

On December 1, the ship made a trip to Sable Island, and from there went to Louisbourg and loaded with coal, returning to Halifax on December 12. From that date until the end of January the steamer was engaged in general lighthouse and buoy work.

The vessel was undergoing general repairs at the Marine and Fisheries wharf at Halifax, from February 1 until April 1. The crew was shipped April 2, and a trip was made eastward in lighthouse and buoy service, and Sable Island was visited. The superintendent of lights was on board during the trip. The general lighthouse and buoy service was continued until June 1<sup>2</sup>. On that date the steamer left Halifax to supply stations at Cape Sable, around the Island of Cape Breton, St. Pauls and Cape Race. The superintendent of lights was on board. The steamer returned to Halifax June 21, and was then prepared to resume the cable service.

## ‘ABERDEEN.’

The *Aberdeen* is an iron screw steamer 180 feet long, 31 feet broad, and 16 feet deep; her tonnage is 674 gross and 266 net. Her captain is Sigismund Belanger, and her crew consists of 36, all told.

This steamer made a trip from Quebec to Pictou for coal, arriving at that place July 2, and served a number of lights in the province of Quebec on the return trip. A trip in the lighthouse service was then made to Belle Isle. From there the ship went to Pictou for coal, and then returned to Quebec, supplying lighthouses on the way. She arrived at Quebec August 10.

The steamer was then placed in the Russell dock for repairs. Considerable repairs were made and additions made to her deck structures. A new cabin was built on deck and the afterhold made larger, thereby increasing her carrying capacity about 150 tons. With these repairs and alterations the vessel is much better fitted for the Quebec lighthouse service. This work cost in the vicinity of \$6,000. The ship came out of the dock October 4.

The *Aberdeen* then left on another lighthouse supply trip to Belle Isle, calling at Cape Bauld, Cape Norman and several other stations on the way. Mr. Noble was taken on board at Belle Isle and conveyed to Flower Cove to put up the lantern. The vessel proceeded from Belle Isle to Sydney for coal. She visited Bird Rocks and several stations in the Gulf and River St. Lawrence, and returned to Quebec, arriving there on November 23.



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The lightship and buoy service was then taken up and the *Aberdeen* was engaged in this service until she was laid up for the winter on December 2.

On April 27, 1900, the *Aberdeen* started to place lightships and buoys in the St. Lawrence River and was engaged in this work until May 1. On the 9th of the same month the ship left Quebec with a fog-alarm boiler for Cape Rosier and from that station proceeded to Gaspé Basin to break up the ice. From that place she proceeded to Sydney for coal and returned to Quebec on May 18, when coal was landed and the ship cleaned and painted.

The *Aberdeen* then entered upon the lighthouse service and was still engaged in it on June 30.

‘QUADRA.’

The *Quadra* is an iron steamer, 174 feet long, 31·1 feet in breadth, 13·6 feet in depth. Her gross tonnage is 573·30 tons and her registered tonnage 265·25. This steamer is commanded by Captain Jno. T. Wallbran, and has a crew of 21 all told.

The steamer was engaged in the regular lighthouse and buoy service of the British Columbia agency from July 1, until December 30, when she was put out of commission and the crew employed to overhaul, clean and paint the hull and overhaul the machinery.

The steamer went into commission in March, 1900, and entered the graving dock to receive the annual overhauling and painting. The bottom of the ship was found to be in very good condition, the Rathjen's paint used last season having formed a splendid enamel.

The *Quadra* then entered upon the buoy service, after which the work of constructing a wave-break at Egg Island was attended to, also the construction of Walter Rock and Enterprise beacons. The steamer continued in the lighthouse and buoy service until the latter part of June. Two weeks were then spent investigating the fisheries of the northern parts of the province.

The vessel then returned to Victoria reaching that port on July 12, when the work of constructing cabins to be used by His Excellency the Governor General and suite, to and from Skagway, was commenced.

‘MINTO’.

The *Minto* is a new iron steamer 225 feet long, breadth 32·6 feet, and depth 20·6, gross tonnage 1,089, net tonnage 371; indicated horse power, 2,900, and nominal horse-power, 216. This steamer is commanded by Captain Allan Finlayson and has a crew of 35 in all.

The steamer left Dundee, where she was constructed, on September 14, 1899, and arrived in Charlottetown on the 25th of that month, having experienced a rough passage.

The ship proceeded to Pictou for coal on September 27, and from there made a trip to Sable Island, returning to Charlottetown on October 11.

The *Minto* left for Pictou on December 18 to coal up for the winter service and entered upon this work on January 2, when the steamer left Charlottetown for Pictou. One round trip was made on this route, but on returning from Pictou the second time the captain deemed it unsafe to enter Hillsboro Bay on account of the



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condition of the ice, and went to Georgetown. The steamer continued on the Pictou-Georgetown route until April 6, 1900, on which date she went to Charlottetown. The Charlottetown-Pictou route was resumed and she continued until April 16, when she was withdrawn from the service.

On May 30, the *Minto* left for Pictou to go on the slip to have the bottom cleaned and painted, this work was completed about the end of May and the ship returned to Charlottetown, where she was laid up at the wharf. She was still there at the end of the fiscal year, overhauling gear, painting, &c.

The gross earnings of the steamer *Minto* amounted to \$11,654.56. She made 81 trips and carried 2,104 passengers and 89,626 packages of goods, besides doing mail service the whole winter, there was therefore no necessity for opening the mail service between Capes Traverse and Tormentine in the small ice boats as usual in former years.

## ‘LANSDOWNE.’

The *Lansdowne* is a wooden steamer commanded by Captain Geo. W. J. Bisset, and has a crew of 34 men in all. Her dimensions are 188 feet in length, 32 feet in breadth and 15 feet in depth; gross tonnage 680, and registered tonnage 463.

This steamer was employed in the lighthouse and coast service of the New Brunswick agency from July 1 to 15, on which date she made a trip to Sable Island with coal and continued in the Nova Scotia agency supplying lighthouses until July 21.

The *Lansdowne* then resumed the lighthouse and coast service of the New Brunswick agency. On July 30, she was laid up in St. John for a few days to have some repairs made to the boiler and the plates on the side of the ship.

On August 7, the steamer again took up the lighthouse and buoy service of the Nova Scotia agency. On October 22, a trip was made to Sable Island, where Colonel Anderson was taken on board.

The *Lansdowne* on November 18, returned to the New Brunswick agency and was employed in the lighthouse and buoy work up to January 28, with the exception of two trips to Seal Island about the end of November.

The steamer arrived at Brier Island, bound for Halifax on January 28, but owing to stormy weather she did not reach that place until February 7. She continued in the Nova Scotia coast service up to April 19, when she returned to New Brunswick.

On May 2, the *Lansdowne* was laid up in St. John Harbour for repairs and was not put into commission again until June 21. From that date until June 30, she was engaged in the lighthouse and buoy service in the New Brunswick agency.

## ‘STANLEY.’

The *Stanley* is an iron steamer, commanded by Captain Angus Brown, and has a crew of 35 all told. Her dimensions are: length 207 feet, breadth 32 feet, and depth of hold 19 feet; tonnage 914 gross and 395 register.

The *Stanley* was laid up at Charlottetown on June 15, for overhauling and was not engaged in any work until August 15, on which date she left for Pictou to coal. On



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her return to Charlottetown she towed the dredge *Prince Edward* to Cascumpec and returned to Charlottetown, where she was again laid up until September 14. The steamer then left to search for the West Point buoy, which had gone adrift. The buoy was picked up on September 17, and the steamer returned to Charlottetown where she was again laid up.

On November 7, a trip was made to Pictou for coal, and on the 20th of the same month the steamer entered upon the coast buoy service, in which she was engaged up to November 25. She was then laid up at Charlottetown until November 30, on which date she left for Georgetown to be in readiness for winter service, if necessary.

The *Stanley* left her winter quarters on March 19, 1900, and proceeded to Pictou to coal up for the mail service, and entered upon this service running between Charlottetown and Pictou. She continued on this route until April 7, when the steamer made a trip to Summerside, and then returned to Charlottetown.

On April 14, the vessel made a trip to the Magdalen Islands with mails and freight, returning to Charlottetown on the 23rd of the same month, where she laid up until May 11. From that date until May 15, the ship was engaged in the coast buoy service. Starting on the 23rd of that month, she made three round trips between Charlottetown and Pictou for the Steam Navigation Company. This service was again taken up on June 4, and continued until the 7th of that month, while the ss. *Northumberland* belonging to the Steam Navigation Company was on the slip.

The *Stanley* left Charlottetown for Pictou on June 12, and went on the slip, and when she came off proceeded to Halifax and entered upon the lighthouse service of the Nova Scotia Agency, in which work she was engaged on June 30.

The earnings of the steamer amounted to \$1,691.95. The vessel carried 140 passengers and 15,407 packages of goods, besides doing some mail service. These figures are of course very small compared with those of last year, as the bulk of the winter service was performed by the steamer *Minto*.

#### ‘ DRUID.’

The *Druid* is an iron screw steamer of 161 feet in length, 21 feet breadth, and 9 feet in depth. Her tonnage is 239 tons gross and 166 tons net. The vessel is commanded by Captain Charles Koenig and has a crew of twenty.

On July 1, the *Druid* left Quebec with Colonel Anderson and J. U. Gregory on board for the Traverse, to assist in the work of sinking the pier for a permanent lighthouse. The Deputy Minister of Marine and Fisheries went aboard at St. Jean Port Joli, and remained for a few days. The steamer left for Quebec on July 8.

The lightship and gas buoy service was then entered upon and the *Druid* was principally engaged in this service up to August 22. Several trips were made to the Traverse, however, during this time in connection with the construction of the permanent lighthouse there, and the steamer also made a number of trips to Grosse Isle in connection with quarantine work.

The steamer was placed in the Russell floating dock on August 22, to have the bottom scraped and painted and some small repairs made. This work was completed



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on August 27, when a trip was made down the river with the Deputy Minister aboard attending to wharfage business, after which the lightship and buoy service was resumed.

From September 13, until November 20, the steamer was engaged in the lightship and buoy service, and assisting in the work of constructing the Traverse Light. She also made a few trips to Grosse Isle. The Hon. Sir Wilfrid Laurier and party went on board on September 26.

The *Druid* was taken to the wharf of M. G. T. Davies at Lévis, for repairs on November 20, and the crew was paid off.

The *Druid* resumed work on April 28, 1900, when the buoy service was entered upon. On May 24, a trip was made to Grosse Isle. The steamer was otherwise engaged in the regular lightship and buoy service up to June 30.

## ‘BRANT.’

The *Brant* is a wooden steamer 100 feet long over all, 19 feet in breadth and 8 feet deep ; her tonnage is 141 gross and 57 net ; she is commanded by Captain D. Mackinnon and has a crew of 12 all told.

This new steamer was put in commission for the first time on September 5, 1899, and was engaged in lighthouse work until October 5, when she entered upon fishery protection work. On November 19, she resumed lighthouse and buoy service and was kept in commission until December 20, when the vessel was laid up for the winter. The lighthouse and buoy service was resumed on May 18, 1900, and continued until July 17.

The cost and maintainance of this steamer was charged to maintenance of lights account.

## ‘SHAMROCK.’

The *Shamrock* is a steam barge 117 feet long, 25 feet in breadth, and 9 feet 7 inches in depth ; her gross tonnage is 237, and net tonnage 161. The *Shamrock* has a crew of 12 all told, including Mr. U. P. Boucher, who is in charge of the steamer and directs her movements. The sailing captain is S. Savaugau.

This steamer is used entirely in the buoy service in the ship channel between Montreal and Quebec ; she was constructed specially for this service by Mr. J. C. Kaine, of Quebec, formerly buoy contractor, and was launched in 1898. She was purchased in the spring of 1899.

The steamer was engaged in buoy work in the St. Lawrence river from April 22, 1900, until December 5, when she was placed in winter quarters at Sorel, P. Q.

## ‘BAYFIELD.’

The *Bayfield* is a wooden steamer 110 feet long, 18 feet wide and 9 feet deep. Mr. W. J. Stewart is in charge of the Hydrographic Survey, and has as his assistants Messrs. F. Anderson and R. E. Tyrwhitt. Captain A. M. McGregor is the sailing master of the *Bayfield*, and the crew consists of 19 men in addition.



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The steamer resumed the survey on May 2, 1900, and ended the season on October 25. The *Bayfield* was employed in surveying on the east shore of Lake Huron, during the whole of the season.

Slight repairs were made to the *Bayfield* in the spring.

OTHER STEAMERS.

The *Acadia*, *Petrel*, *Curlew*, and *La Canadienne*, are engaged in fisheries protection work and reports concerning them will be found in the Fisheries Report of this department.

STATEMENT showing cost of maintaining Dominion Steamers from 1884 to 1900.

Year.	Cost of Maintenance.	Year.	Cost of Maintenance.
	\$ cts.		\$ cts.
1883-84.....	122,816 25	1892-93.....	146,521 77
1884-85.....	148,864 26	1893-94.....	142,487 42
1885-86.....	130,759 83	1894-95.....	129,899 80
1886-87.....	141,424 42	1895-96.....	150,519 41
1887-88.....	150,659 19	1896-97.....	136,940 11
1888-89.....	126,629 33	1897-98.....	117,644 39
1889-90.....	114,959 20	1898-99.....	145,270 75
1890-91.....	111,437 03	*1899-1900.....	180,975 45
1891-92.....	127,406 28		

\* Which includes outfit and stores to steamer *Minto* in Scotland, which properly belongs to construction, also alteration of ss. *Aberdeen*.

CERTIFICATES TO MASTERS AND MATES.

The report of Captain W. H. Smith, R.N.R., Chairman of the Board of Examiners of Masters and Mates, forms Appendix No. 13 of this report.

During the fiscal year the Board of Examiners of Masters and Mates held examinations at Halifax 13 times, at St. John 6 times, at Yarmouth 3 times, but none at Quebec, making 22 times in all. There were also 5 examinations held at Victoria, B. C., the papers and problems were forwarded to the Agent at that place and returned to Halifax, for inspection of the Chairman of the Board.

At Halifax, nine applications were made for foreign-going certificates of competency as master, and 11 for coasting and inland ; 8 foreign-going and 8 coasting and inland masters received certificates ; 14 applications were made for foreign-going certificates of competency as mate, and 3 for coasting and inland ; 11 foreign-going and 3 coasting-mates received certificates.

At St. John, 6 applications were made for foreign-going certificates of competency as master, and 4 foreign going masters received certificates ; 7 applications were made for foreign going certificates as mate, and 7 mates received certificates ; 5 applications were made for coasting certificates as master, and three as mate ; 3 coasting masters received certificates, and 1 mate.



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At Yarmouth, 3 applications were made for foreign-going certificates as master, and 2 foreign-going masters received certificates; 1 application was made for a foreign-going certificate as mate, and 1 mate received a certificate.

At Victoria, B.C., one application was made for foreign-going certificates as master and one foreign-going master received a certificate; five applications were made for foreign-going certificates as mate, and five mates received certificates.

In supplement No. 1 to this report will be found a list of all who have obtained certificates of competency and service, either as master or mate, during the year ended June 30, 1900.

## INLAND AND COASTING CERTIFICATES.

During the twelve months ended June 30, 1900, the number of candidates in the Dominion who have passed and obtained master's certificates of service was eleven, and one mates' certificate of service has been issued the amount paid for these certificates was ninety-two dollars.

The number of certificates of competency as master was 185, as mate eighty-nine, and the amount paid for these certificates was \$3,193. The amount received for renewed certificates of competency and service was \$110, making a total of \$3,395, received for master's and mate's inland and coasting certificates.

A list of certificates issued during the twelve months ended June 30, 1900, will be found in supplement No. 1 to this report.

The total amount of fees received on account of certificates of competency and service, sea-going and inland coasting, during the fiscal year ended June 30, 1900, was \$4,221.50, and the amount in detail expended on account of the service as will be seen by reference to Appendix No. 1, to this report was \$3,750.69, leaving a balance to the credit of this service of \$470.81. The vote for this service was \$5,000, and the sum expended to June 30, 1900, \$3,750.69, leaving an unexpended balance of \$1,249.31.

The following statement shows the total receipts and expenditure on account of masters and mates since 1871:—

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	Ex- penditure.	Receipts.		Ex- penditure.	Receipts.
	\$ cts.	\$ cts.		\$ cts.	\$ cts.
For the fiscal year ended June 30, 1871.	1,410 45		For the fiscal year ended June 30, 1889.	4,381 04	2,202 00
" " 1872.	4,312 07	1,344 00	" " 1890.	4,117 83	2,186 00
" " 1873.	6,466 18	4,963 00	" " 1891.	4,255 24	2,586 00
" " 1874.	4,520 19	2,995 00	" " 1892.	4,363 88	2,194 00
" " 1875.	5,696 62	2,715 00	" " 1893.	4,116 99	2,484 00
" " 1876.	4,672 08	2,021 87	" " 1894.	3,721 33	2,907 04
" " 1877.	4,050 00	1,740 50	" " 1895.	3,758 29	3,974 50
" " 1878.	4,249 76	1,296 50	" " 1896.	4,062 82	2,307 50
" " 1879.	4,250 12	1,334 50	" " 1897.	3,536 29	3,754 00
" " 1880.	4,253 43	1,547 00	" " 1898.	3,335 40	4,800 00
" " 1881.	3,888 41	1,333 50	" " 1899.	3,568 26	4,486 50
" " 1882.	3,965 19	1,152 50	" " 1900.	3,750 69	4,221 50
" " 1883.	4,021 20	1,314 00			
" " 1884.	3,909 59	9,437 50	Expenditure.....	126,119 72	81,739 71
" " 1885.	4,324 15	2,897 00	Receipts.....	81,739 71	
" " 1886.	5,245 28	2,152 00			
" " 1887.	4,855 98	2,172 00	Excess of expenditure over receipts.....	44,380 01	
" " 1888.	5,060 96	3,220 80			



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## WRECKS AND CASUALTIES.

The total number of casualties to British and Canadian sea-going vessels reported to the department, as having occurred in Canadian waters and to Canadian sea-going vessels in waters other than those of Canada, during the twelve months ended June 30, 1900, was 151, representing a tonnage of 59,066 tons register, and the amount of loss both partial and total, to vessels and cargoes as far as ascertained, was \$356,848. The number of casualties to inland vessels, so far as have been reported, were slight and unimportant.

The number of lives reported lost in connection with the casualties was 74. A statement of the wrecks and casualties will be found in supplement No. 1 to this report.

## SICK AND DISTRESSED MARINERS.

## MARINE HOSPITALS.

Under the provisions of chapter 76, Revised Statutes, a duty of two cents per ton register is levied on every vessel arriving in any port in the province of Quebec, Nova Scotia, New Brunswick, Prince Edward Island and British Columbia, the money thus collected forming the Sick Mariners' Fund. Vessels of the burden of 100 tons and less pay the duty once in each calendar year, and vessels of more than 100 tons, three times in each year.

By an amendment of this Act passed at the session of parliament in 1887, 50-51 Victoria, chapter 40, it is provided that no vessel, which is not registered in Canada and which is employed exclusively in fishing or on a fishing voyage, shall be subject to the payment of this duty.

The receipts for the fiscal year ended June 30 last, amounted to \$59,954.50, being an increase of \$2,588.71 as compared with the preceeding year. The increase and decrease in receipts for sick mariners' dues in the various provinces were as follows:— Nova Scotia, increase \$1,905.73; Quebec, decrease \$843.17; New Brunswick, increase \$744.71; Prince Edward Island, decrease \$20.34; British Columbia, increase \$831.40.

The Sick Mariners' Act does not apply to the province of Ontario, and consequently no dues are collected from vessels in that province, although a small expenditure is incurred on account of sick seamen. An appropriation is made by parliament to cover the expenditure at Kingston and St. Catharines, where general hospitals have been established and sick seamen are attended. During the fiscal year ended June 30 last, sick seamen were paid for at a per diem rate of 90 cents.

In the province of Quebec the expenditure on account of sick seamen amounted to \$7,515.17, being \$836.28 less than the previous year. The total collections for the entire province amounted to \$16,635.24, being \$843.17 less than in the previous year.

At the port of Montreal, sick seamen are cared for at the General Hospital and at Notre Dame Hospital, under an arrangement made by the department, by which 90 cents per diem is paid for board and medical attendance of each seaman. The sick mariners' dues collected at the port of Montreal during the fiscal year ended June 30, amounted to \$7,702.00.



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At the port of Quebec sick seamen are cared for at the Jeffery Hale and the Hotel Dieu hospitals, the sum of 90 cents per diem for each seaman is allowed in return for medical attendance and board. The sick mariners' dues collected at Quebec amounted to \$5,986.12.

The expenditure on account of sick seamen in the province of New Brunswick for the fiscal year amounted to \$6,482.08, being \$1,229.85 more than the preceding year, and the collection of dues to \$11,282.95, or \$744.71 more than the previous year. Marine hospitals have been maintained at Miramichi, Richibucto and Bathurst.

The Sackville hospital has been leased to Mr. Bradford Carter for a term of years from 1892, at a nominal rental. The terms of the lease require Mr. Carter to keep the building in repair, and if the department should require the hospital at any time it is to be handed over on notice being given.

In the province of Nova Scotia, marine hospitals are maintained at the ports of Yarmouth, Pictou, Sydney, Lunenburg and Point Tupper. The total expenditure on account of sick seamen in the province of Nova Scotia for the fiscal year amounted to \$16,360.30, and the receipts to \$22,625.15.

At Halifax, provision is made for the care of sick seamen at the Victoria General Hospital, under arrangements made with the managers, by which the sum of 90 cents per diem is allowed for board and medical attendance to sick seamen.

In the province of Prince Edward Island the sum expended on account of sick and disabled seamen during the fiscal year was \$1,111.20, and the receipts from sick mariners' dues were \$362.76.

Sick seamen are cared for at the Charlottetown and Prince Edward Island hospital, under arrangements made with the managers of these institutions, at the same rate that is paid to the public hospitals in other parts of the Dominion.

In the province of British Columbia the sum of \$4,193.74 was expended for sick and disabled seamen, while the receipts from the collection of sick mariners' dues amounted to \$9,078.02.

The marine hospital at Victoria has in attendance a medical superintendent with a salary of \$300 per annum, a keeper whose salary is \$500 per annum. He is also allowed a rate of \$5 per week for board and attendance of each seaman. The keeper procures fuel, light, bedding, &c., at his own expense.

At ports where no hospitals are established in the province of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, sick seamen are cared for under the chief officer of Customs, when the vessel to which the seamen belong have paid their dues according to law. A circular to collectors of Customs was issued February 7, 1891, permitting sick seamen to be attended to at the port of arrival of a vessel, provided that the regular dues were previously paid at some port.

During the fiscal year the sum of \$1,738.26 was expended for shipwrecked and distressed seamen, under the provisions of the Sick and Distressed Mariner's Act.

The total expenditure on account of sick and disabled seamen and marine hospitals amounted to \$36,005.04, and the appropriation by parliament for this service was \$36,000. The dues collected amounted to \$59,954.50. It will be seen that the receipts exceed the expenditure \$23,949.46.



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The receipts and expenditure in connection with sick and distressed seamen from the year 1869 were as follows :—

			Receipts.	Expenditure.
			\$ cts.	\$ cts.
For the fiscal year ended June 30,	1869	.....	31,353 78	26,987 64
"	1870	.....	31,410 46	27,029 34
"	1871	.....	29,683 41	28,971 22
"	1872	.....	34,911 64	34,947 60
"	1873	.....	37,136 10	41,016 43
"	1874	.....	41,500 16	59,778 90
"	1875	.....	37,801 46	50,684 76
"	1876	.....	41,287 66	48,828 49
"	1877	.....	43,739 21	51,647 94
"	1878	.....	44,665 07	43,780 90
"	1879	.....	37,779 57	42,729 36
"	1880	.....	42,523 20	42,160 91
"	1881	.....	49,779 72	40,667 52
"	1882	.....	45,951 47	39,359 11
"	1883	.....	45,573 42	36,249 65
"	1884	.....	48,667 07	39,553 58
"	1885	.....	39,068 39	44,501 57
"	1886	.....	40,848 05	50,377 62
"	1887	.....	42,334 92	37,447 35
"	1888	.....	41,669 64	36,447 85
"	1889	.....	39,306 29	41,320 59
"	1890	.....	47,881 75	41,729 11
"	1891	.....	43,829 68	35,155 12
"	1892	.....	45,381 92	33,498 83
"	1893	.....	46,190 69	35,052 37
"	1894	.....	49,105 40	38,403 94
"	1895	.....	42,815 74	38,332 55
"	1896	.....	45,751 61	36,683 36
"	1897	.....	54,358 10	35,931 19
"	1898	.....	54,552 91	34,526 83
"	1899	.....	57,365 79	37,353 29
"	1900	.....	59,971 84	32,743 30
Total.....			1,394,196 02	1,266,904 92
Deduct expenditure from receipts.....			1,266,904 92	
Excess of receipts over expenditure.....			127,291 10	

STEAMBOAT INSPECTION.

The total number of steamboats reported in the several districts in the Dominion is 1,491; of this number 106 are new vessels, the gross tonnage being 244,401. Fees were collected for inspection amounting to \$35,465.83 ; the fees from engineers for certificates amounted to \$809, and fees for inspection of tow barges to \$200, making the total receipts from steamboat inspection and engineers' certificates \$36,474.83, but out of this amount refunds were made to date which should have come out of former years receipts. The receipts for the previous year from these sources amounted to \$32,814.45 ; it will thus be seen that the receipts of the fiscal year ending June 30, 1900 exceed the receipts of the proceeding year by \$3,660.38. Owing to the increase of tonnage of steamers, mainly caused by the Yukon trade, and the additional work of inspecting steamers without certificates, not registered in the Dominion, the work of inspection has been increased is most of the divisions.

The total expenditure in connection with inspection was \$27,965.92, a decrease of expenditure for the last fiscal year of \$69.57.



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The consolidated laws relating to steamboat inspection came into force on the 1st day of January, 1899.

The report of the Chairman of the Board of Steamboat Inspection forms an appendix to this report.

The following is a comparative statement of the receipts and expenditure in connection with Steamboat Inspection :—

			Receipts.	Expenditure.
			\$ cts.	\$ cts.
For the fiscal year ended June 30,	1870.....		12,521 29	7,379 18
"	" 1871.....		10,369 96	8,321 00
"	" 1872.....		11,710 43	8,500 00
"	" 1873.....		15,412 75	11,205 54
"	" 1874.....		15,603 19	10,291 58
"	" 1875.....		15,011 90	12,199 81
"	" 1876.....		13,811 24	13,081 86
"	" 1877.....		15,858 42	12,073 01
"	" 1878.....		12,431 25	13,228 28
"	" 1879.....		12,331 16	13,076 46
"	" 1880.....		15,424 02	11,854 34
"	" 1881.....		16,905 49	12,211 65
"	" 1882.....		15,277 78	14,835 97
"	" 1883.....		12,577 36	16,209 02
"	" 1884.....		15,371 79	21,893 28
"	" 1885.....		13,343 66	23,235 04
"	" 1886.....		14,087 76	21,775 57
"	" 1887.....		12,701 20	22,837 80
"	" 1888.....		12,550 14	21,430 45
"	" 1889.....		12,576 18	22,313 03
"	" 1890.....		19,859 18	20,989 52
"	" 1891.....		21,644 72	22,183 76
"	" 1892.....		20,994 84	22,736 59
"	" 1893.....		25,295 35	24,386 95
"	" 1894.....		24,835 47	25,961 36
"	" 1895.....		24,630 56	26,385 88
"	" 1896.....		24,002 32	26,321 27
"	" 1897.....		25,094 95	26,837 83
"	" 1898.....		31,525 40	26,342 29
"	" 1899.....		33,854 45	28,035 49
"	" 1900.....		36,474 83	27,965 92
			563,928 99	577,119 73
Deduct receipts from expenditure.....				563,928 99
Balance to debit of fund.....				13,199 74
Refunds.....				2,652 82
				15,843 56



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The following list contains the names of the inspectors of boilers and machinery and hulls and equipments of steamboats, viz :—

Name.	Position.	Address.
Edward Adams.....	Chairman of Board of Steamboat Inspection.....	Ottawa.
M. P. McElhinney ..	Inspector of Hulls and Equipments.....	"
I. J. Olive .. . . .	" .. . . .	St. John, N.B.
S. R. Hill.....	" .. . . .	Halifax, N.S.
William Evans.....	" .. . . .	Toronto, Ont.
P. D. Brunelle.....	" .. . . .	Quebec.
R. Collister.....	" .. . . .	Victoria, B.C.
John Dodds .....	Inspector of Boilers and Machinery.....	Toronto, Ont.
E. W. McKean.....	" .. . . .	"
T. P. Thompson.....	" .. . . .	Kingston, Ont.
Wm. Laurie.....	" .. . . .	Montreal, P.Q.
L. Arpin .. . . .	" .. . . .	"
J. Samson .....	" .. . . .	Quebec, P.Q.
J. P. Esdaile .. . . .	" .. . . .	Halifax, N.S.
W. L. Waring.....	" .. . . .	St. John, N.B.
J. A. Thomson.....	" .. . . .	Victoria, B.C.
G. P. Phillips. . . . .	" .. . . .	Rat Portage, Ont.
Frank M. Richardson...	" .. . . .	Vancouver.

OUTSIDE SERVICE, MARINE BRANCH.

The number of persons employed in the Outside Service on June 30, 1900, was as follows :—

Superintendent of lights and light-keepers, &c., in Ontario and above Montreal.....	184
Officers of agency in the city of Quebec and light-keepers, fog-whistle-keepers, crews of light-ships, &c., at and below Montreal, in the province of Quebec .....	175
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, attendants at humane establishments, &c., in Nova Scotia.....	220
Agent, clerk, messenger, superintendent of lights, light-keepers, fog-whistle-keepers, &c., in New Brunswick.....	117
Agent, foreman of works, messenger and light-keepers, in Prince Edward Island .....	48
Agent and light-keepers in British Columbia.....	32
Officers and crews of Dominion steamers and vessels, including Fisheries Protection Service.....	420
Coxswains of life-boats .....	23
Inspectors of steamboats.....	22
“ shipments of live stock .....	4
Examiners of masters and mates, and clerk to chairman of Board .....	19
Officers and servants in marine hospitals.....	20
Shipping masters.....	34
Harbour masters .....	202



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Officers of observatories, meteorological observers, &c., receiving pay.....	163
Hydrographers and engineers at Ottawa.....	7
Receivers of wrecks .....	46
Wharfingers.....	174
• Making a total of.....	<u>1,910</u>

For the previous year the number was 1,907. In addition to the 1,910 mentioned above, there are 71 registrars of shipping, who act under the direction and control of this department, but are, at the same time, collectors of customs at various ports of registration, and receive no salary or fee in their capacity of registrars. There are 95 measurers and surveyors of shipping throughout the Dominion who act as officers of this department, and are remunerated from their fees of office, although in addition to such office, many of them hold positions in the customs service. Also, in addition to the above by Orders of Council of April 21, and December 2, 1874, the chief officer of customs at each port in the provinces of Quebec, Nova Scotia, New Brunswick, British Columbia and Prince Edward Island, where no separate shipping office has been established, is to be held and deemed a shipping master, is to receive the fees, make the yearly returns to the department, and act in that capacity under its directions.

## LIVE STOCK SHIPMENTS.

In last year's report the statements furnished by Messrs. George Pope and E. B. Morgan, inspectors at Montreal, contained the total number of live stock shipped from the port of Montreal for the season of 1899. The returns show that the total number of cattle shipped from Montreal during the season of 1900 was 92,180, an increase of 10,376 over 1899. The total number of sheep shipped during the same time was 34,833, a decrease of 23,444 from the shipments of 1899. The number of horses shipped from Montreal during 1900 was 2,833, being 1,906 less than last year. From St. John, N.B., 15,472 cattle, 1,263 sheep and 501 horses. From Halifax 5 horses were shipped. The total number of United States cattle in bond shipped from Canada numbered 5,688. Total from all these ports 107,652 cattle, 36,096 sheep, and 3,339 horses, not including United States cattle in bond.

The shipments in detail will be found in the appendix to this report under the head of Live Stock Shipments.

## METEOROLOGICAL SERVICE.

Efforts have been made to bring the monthly weather review of this service up to date. The monthly review gives a short description of the weather and brief articles on climatology. Four new stations were established in British Columbia, six in the Northwest Territories, four in Ontario and two in Quebec. One station that had been discontinued in New Brunswick was resumed.

The Departments of Agriculture in Ontario, Manitoba and British Columbia realize the importance of reliable meteorological data in connection with statistics of crops, acreage under cultivation, &c. Monthly charts containing notes on the leafing of trees



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and flowering of plants and other information are published. In August, 1896, the publication of a daily weather chart was commenced, containing information gathered from meteorological observations taken each day at 8 a.m. This chart is displayed in Toronto at the Board of Trade, harbour master's office, and at some of the public schools. Private individuals obtain the chart, paying for it \$4 per annum. The forecasts of the weather are telegraphed to thirty-six ports in the maritime provinces, two in British Columbia, and also to all the principal ports on the great lakes. The value of these forecasts will be seen by reading the report of the director.

### SIGNAL SERVICE.

The reports of the superintendents of Signal Service at Quebec and Halifax contain information valuable to mariners. Mr. J. U. Gregory is superintendent of this service at Quebec, and Major H. B. Roberts, of the Royal Engineers, at Halifax.

Arrangements have been completed between the government of Canada and the Society of Lloyd's, whereby the following signal stations, maintained by the Dominion of Canada, have been included in Lloyd's system of reporting stations. Orders forwarded to Lloyd's can be notified to vessels by means of these signal stations on the same terms and conditions as observed at Lloyd's signal stations, and vessels signalling to these Canadian signal stations will be reported to Lloyd's for insertion in the Lloyd's List and Shipping Gazette, and daily press, in the same manner as reports from Lloyd's signal stations.

#### LIST OF STATIONS.

Cape Ray, Newfoundland.	South West Point, Anticosti.
St. Pauls Island, Cape Breton.	West Point, "
Cape St. Lawrence, "	Cape Rosier, Gaspé Coast.
Heath Point, Anticosti.	Fame Point, "
South Point, "	Cape Magdalen, "
Amherst Island, Magdalen Islands.	

The government telegraph system was, during the past season, extended along the north coast of the Gulf of St. Lawrence to the Strait of Belle Isle, and it was intended to connect Belle Isle, last fall, with the shore telegraph system by a cable, but the loss of the *Newfield* has postponed the completion of this work.

Lloyd's have been in communication with this department on the subject of establishing one of their reporting stations on Belle Isle, and have been offered the active assistance of this department in doing so. They are also considering the feasibility of connecting Belle Isle with the main land by a system of aerial telegraphy, so that communication would not be interrupted by a break in the cable.

Arrangements have been completed by the Department of Marine and Fisheries whereby all inward bound vessels showing their official numbers will be reported from marine signal stations in the river and gulf of St. Lawrence immediately, and all reports will be promptly posted on the bulletin board of the Great Northwestern Telegraph Company's office in St. Peter street, Quebec, and on that of the Board of Trade in Montreal.

Weather and ice reports will be forwarded twice a day, as formerly, and similarly posted.



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Arrangements have also been made for repeating all reports received to the pilot station at Father Point, so that pilots will be promptly advised of the locality of inward bound vessels.

## REMOVAL OF OBSTRUCTIONS TO NAVIGATION.

The sum of \$1,000 was appropriated by parliament for the removal of obstructions to navigation. By reference to the statement of expenditure it will be seen that the sum of \$252.19 was expended for the fiscal year. A statement in detail will be found in the report of the chief engineer of this department under the heading of Removal of Obstructions. The expenditure is given in detail for the amount that has been expended during the calendar year, and therefore includes payments which have been made since the ending of the fiscal year.

## COASTING TRADE OF CANADA.

By the provisions of chapter 83, Consolidated Statutes of Canada, being an Act respecting the Coasting Trade of Canada, no goods or passengers can be carried by water from one port in Canada to another except in British ships, but the Governor in Council may, from time to time declare that the Act shall not apply to ships or vessels of any foreign country in which British ships are admitted to the coasting trade of such country, and to carry goods and passengers from one port or place to another in such country. The parliament of Canada was empowered to pass the Act alluded to, under the provisions of the Imperial Act, 32 Vic., chap. 11, intituled: An Act for amending the Law relating to the Coasting Trade and Merchant Shipping in British Possessions, which came into operation in this country on its proclamation by the Governor General on October 23, 1869.

It was ascertained that the following countries, viz., Italy, Germany, the Netherlands, Sweden and Norway, Austro-Hungary, Denmark, Belgium, and the Argentine Republic, allowed British ships or vessels to participate in their coasting trade on the same footing as their own national vessels—the ships of Italy by Order in Council of August 13, 1873; those of Germany by Order in Council of May 14, 1874; those of the Netherlands by Order in Council of September 9, 1874; those of Sweden and Norway by Order in Council of November 5, 1874; those of Austro-Hungary by Order in Council of June 1, 1876; those of Denmark by Order in Council of January 25, 1877; those of Belgium by Order in Council of September 30, 1879; and those of the Argentine Republic by Order in Council of May 18, 1881, were admitted to the coasting trade of Canada.

## LEGISLATION.

During the season of 1900, the following Acts were passed:

Safety of Ships Amendment Act, 1900.

An Act to amend the Pilotage Act, chapter 80, Revised Statutes of Canada.

F. GOURDEAU,

*Deputy Minister of Marine and Fisheries.*

DEPARTMENT OF MARINE AND FISHERIES,  
OTTAWA, December, 1900.



## ANNUAL REPORT OF THE CHIEF ENGINEER OF THE DEPARTMENT OF MARINE AND FISHERIES

The Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit a report of the work done in the several services under the supervision of this office during the eleven months ended on November 30, 1900.

This embraces most of the technical work at departmental headquarters, including the construction and maintenance of lighthouses, light-ships, fog-alarms, buoys and beacons; the supervision of construction and repairs of lifeboats; the administration of the vote for the removal of wrecks and obstructions in navigable waters; tidal and current surveys; hydrographic surveys, and the publication, examination and correction of hydrographic charts; construction of and repairs to fish hatcheries and refrigerators; engineering points in connection with the construction and maintenance of fish-passes; supervision of surveys of oyster beds; examinations of applications for foreshore, wharf and water lots as they affect the interests of navigation: preparation and publication of notices to mariners and hydrographic notes, &c.

There are special staffs appointed for the tidal observation work and for the hydrographic survey work; the remainder of the work of the branch is attended to by the general staff of the office.

### STAFF.

I am pleased to be able to report that my staff has worked to my entire satisfaction throughout the past exceedingly busy season, and the record of work done testifies to their industry.

Mr. B. H. Fraser has been sent out on outside work and inspection more than in former years. The placing and maintenance of the Parry Sound gas buoys has been under his charge; he unloaded and shipped to British Columbia the Brochy ledge cable; repaired the Snake island pier, and filled the Green shoal pier with concrete amongst other outside work. During my absences he has been in charge of my office.

Mr. J. M. O'Hanly is in charge of the records and plans in the draughting room, and has been very busily employed throughout the year.

Mr. J. F. Fraser, since my last report, has been wholly employed in connection with the construction of fish-bait freezers, and has been throughout the year absent in the maritime provinces.

Mr. H. E. Fosbery, who has had experience as a draughtsman in an architect's office, was employed temporarily as a draughtsman on June 27, 1900, and is yet employed.

Mr. W. B. Lindsay, a graduate of the Royal Military College, was employed temporarily as a draughtsman on July 23, 1900, and is yet employed.



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Mr. W. H. Noble has been employed on construction work in Ontario exclusively, throughout the year. Last winter he rebuilt the lighthouse at Green shoal, in the Ottawa river, on a steel and concrete pier ; he also built a lighthouse on Snake island pier in Kingston harbour. In the spring he erected three new range light towers in Midland harbour, and succeeded in the difficult task of removing a lighthouse, all standing, from Gin rock to Brébeuf island ; he then arranged for the erection of a lightkeeper's dwelling on Flower Pot island, and finally took charge of the construction of the foundation of the large new lighthouse to be built on Pelee passage middle ground, and had the caisson ready for sinking before the close of navigation. I wish to bear special testimony to Mr. Noble's energy and integrity in carrying out these works, some of which involved much responsibility and anxiety.

OFFICE WORK.

A large proportion of the work done by the general staff of the branch consists in the construction and maintenance of light buildings, fog-alarms, buoys, beacons and other aids to navigation. Full details of the work done in this connection last year are contained in a separate report prepared by me, and attached hereto. (Inclosure A.)

Plans and specifications for all important new buildings and repairs are made or approved in this office.

The following table indicates the work done in the draughting office during the eleven months ending November 30, 1900 :—

Description of work.	Plans designed.	Plans received.	Copies made.
Lighthouse towers and dwellings.....	23	6	70
Details.....	18	1	41
Wharfs, piers, &c.....	3	4	8
Outbuildings.....	2	.....	11
Buoys and apparatus.....	9	5	59
Machinery.....	.....	6	.....
Lanterns.....	1	1	4
Fish hatcheries.....	3	.....	16
Steamers.....	5	1	49
Land surveys.....	.....	24	44
Charts.....	.....	5	5
Charts under construction.....	1	.....	.....
Miscellaneous.....	15	57	85
Plans relating to foreshore.....	.....	88	.....
	80	198	392

Total plans for eleven months from January 1 to November 30, 1900.....	670
Charts received and recorded.....	129
“ “ entered in chart book.....	32
Photographs received and recorded.....	149
Specifications written.....	31
Notices to Mariners issued (comprising 230 subjects)....	101

The work of examining applications for water lots in public harbours, which is always a tedious and intricate matter, increased very much during the past year, until it seriously interferes with the prompt despatch of more purely engineering work. It is proper that the plans and descriptions should be checked in this office, but most of



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the work involved in preparing the cases for consideration is of a strictly legal character, upon which I often feel at a loss to report. There should be an official in the department with some special legal knowledge to whom the investigation of titles, the legal status of conflicting interests, and other legal and notarial work required in the department, could be entrusted.

Another branch of work which has greatly increased of late years is the preparation of notices to mariners. During the past eleven months, 101 notices, embracing 230 different subjects, have been issued, and the checking of the information and comparison with charts, &c., involve a great deal of clerical labour and correspondence. It seems to be almost necessary to allot a man with special hydrographic knowledge to attend to this particular work. To do the work as carefully, correctly, and promptly as it ought to be done would require a large proportion of the time of one man.

An attempt is made to publish, as well as purely Canadian work, any information obtained respecting waters contiguous to the International boundary line, or respecting routes frequented by Canadian shipping, but this has only been imperfectly done.

During the past eleven months foreign notices were issued covering 6 items relating to Newfoundland and the French Islands in the Gulf, one item relating to the Atlantic, 45 to the inland, and 11 to the Pacific waters of the United States, as well as eight notices describing transatlantic and transpacific aids.

The usual annual edition of the list of all the lights and fog signals on the coasts, rivers and lakes of the Dominion, corrected to April 1, 1900, was published on July 10.

#### PERSONAL INSPECTIONS.

During the past year the demands of the executive work of the office were so urgent that I was unable to do as much outside inspection as was desirable.

I visited the Traverse pier on two or three occasions, examined the bottom for scour, and started the work on the tower; also took soundings in the channel there; at St. Thomas, where ships had complained of striking, and above Quebec; and inspected the new range lights at Pointe à Basile and Ste. Croix.

I visited Pelee passage several times, and surveyed the Middle ground for a site for the new lighthouse, supervised the construction of the caisson at Amherstburg, and incidentally did much work in the neighbourhood.

In September, I inspected all aids to navigation from Blind river to Michipicoten harbour, in Algoma, and arranged for many improvements in aids to navigation, which are described in the detailed report (Inclosure A).

It is desirable that I should inspect next season all lights on the lower St. Lawrence route, in Cape Breton, and in the Bay of Fundy.

#### REMOVAL OF OBSTRUCTIONS.

There were no heavy demands during the past eleven months, on the vote for removal of obstructions, administered by this branch, but considerable useful work was done and a consistent effort is being made to compel the owners to incur the expense of protecting navigable waters by caring for their own wrecked property. Whenever an opportunity occurred, government steamers were utilized to remove wreckage.



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The following statement shows work done on wrecks, so far as it has come under the official notice of this department.

Obstruction.	Locality.	Work done, &c.	Cost to government.
			\$ cts.
Schr. <i>Cornet</i> sunk.....	Port Credit, Ont.....	Wreck removed by John Miller of Port Credit.....	25 00
Schr. <i>Safeguard</i> sunk.....	Hillsborough Bay, P.E.I.....	Towed out and beached by D.G. S. <i>Brant</i> . Afterwards disappeared.....	None.....
Logs and snags.....	Jemseg, Grand Lake & Salmon River, N.B.	Removed by Str. <i>May Queen</i> ....	25 00
Crib in dock.....	Port Arthur, Ont.....	Dredged out by the Department of Public Works.....	120 00
Coal barge <i>Annie L. Taylor</i> sunk.....	Halifax Harbour, N.S.....	Removed by owners .....	None....
Schooner sunk.....	Off Low Point, C.B.....	Broken up by D. G. S. <i>Gladiator</i>	None.....
Tug <i>Ruby</i> beached.....	Port Stanley Harbour, Ont....	Towed outside by D. G. S. <i>Petrel</i> .....	None.....
Piles .....	" "	Removed by Lake Erie R.R. Co.	None.....
Schr. <i>E. M. D. Hardy</i> sunk.....	Louisbourg Harbour, N.S....	Mariners warned.....	None.....
Old wreck in entrance.....	" "	Disappeared.....	.....

## CLOSE OF NAVIGATION.

In consequence of the large quantity of freight seeking shipment quite up to the close of navigation, urgent demands were made on the department to leave the buoys and lightships in the upper lakes and river St. Lawrence in position later in the fall than has been our practice, and the exceptionally mild weather of the early winter encouraged shippers to hope for a particularly late close of navigation. The result, from the department's point of view, has not been encouraging; two out of three gas buoys at the entrance to Parry sound were driven from their positions and wrecked; many of the buoys between Montreal and Quebec were carried away by the ice, and their recovery will give rise to some expensive claims for salvage; the lower Traverse lightship was driven from her position by ice and forced to take shelter at Les Eboulements, where she will have to winter instead of being brought to Quebec for the usual winter overhaul. The steamer *Druid*, in recovering some of the gas buoys, was caught by the ice and her hull considerably damaged.

Under these circumstances, it appears to me necessary that the department should take in the buoys earlier than was done this season; in other words, that we should go back to the practice of previous years. It is hopeless to attempt to maintain an efficient buoy service after ice begins to form on our coasts, and if the necessities of commerce compel vessels to navigate later, they ought to so time their departures that they can get through critical points in daylight, with the help of permanent shore marks.

The establishment of a permanent lighthouse at the upper end of the Traverse has proved a great boon in the navigation of the St. Lawrence below Quebec, as it enabled vessels to go through the Traverse after the lightship had been driven from her station.



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## BUOYAGE.

The number of buoys maintained in Dominion waters steadily increases from year to year. Applications were received for new buoys from many localities. In some cases new buoys were added to the number in districts formerly buoyed, and in other cases new districts were buoyed for the first time.

There are now about 330 districts including harbours, bays, rivers, and lakes buoyed with over 3,000 buoys.

The Montreal ship channel buoys were efficiently maintained during the past year, and very few complaints were made respecting buoys being out of position. They were, however, left out very late this fall to aid the *Paliki* to go to sea, and in consequence were caught in the ice, and the wooden spar buoys were so much cut up that Mr. Boucher, engineer in charge of the service, reports that a third of the wooden buoys will require to be renewed next spring. Many of the steel buoys, including the two gas buoys, were carried away from their stations by the ice. This damage shows once more the necessity of removing the buoys from the river in good season every autumn.

All the large buoys on the more exposed portions of the coast and all the gas buoys in Quebec, whistling buoys and bell buoys and a number of can and conical buoys are maintained by this department, the government steamers under the control of our agents being utilized as buoy tenders. In Quebec over fifty buoys, including eleven gas buoys, are so maintained; in Nova Scotia thirty-three signal buoys are kept in position and about thirty steel can buoys, directly under the agency; in New Brunswick ten signal buoys are directly under the agency; in Prince Edward Island three signal buoys; and in British Columbia about sixty large buoys of various descriptions are maintained by the agency; in Ontario four bell buoys and five gas buoys are maintained. It will be seen by reference to my detailed report that a large number of additional steel buoys, including heavy signal buoys, were installed during the past season in the maritime provinces. I would draw attention to the fact that the number of buoys of this class looked after by the government steamers has now become so large that the steamers cannot give them prompt and proper attention, and consequently numerous losses occurred this fall. Next year it will be necessary either to put on additional steamers to attend to the buoy service, or to limit the number of buoys maintained directly by the agencies of the department.

In some districts the harbour masters attend to the buoyage, in others the buoys are under the control of local harbour boards. In the remaining cases, buoys are maintained under a contract system, the contractors undertaking to maintain the buoys according to a strict specification for a bulk sum per annum. The contracts usually run for a period of three years. There are now about 150 contracts in force, a number having recently expired. The office work in connection with the maintenance of the buoy service and preparation of contracts is attended to by Mr. W. W. Stumbles. This involves an immense amount of detail, and the work has been very conscientiously performed.

Appended (inclosure B) is a list of the buoys in the Dominion under departmental control.

In addition to the buoys there are a large number of unlighted day beacons on our coasts, a list of which has not yet been prepared.



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In that part of the river St. Lawrence, between Kingston and Montreal, which is in alternate stretches of river navigation and of canals, the maintenance of aids to navigation is under divided control, this department maintaining some of the lights and buoys, and the Department of Railways and Canals maintaining others. It is evident that such a division of control is fatal to efficiency, and I think that if the department of Railways and Canals intend to continue the maintenance of the lights and gas buoys which they established last year, it would be well for them to take over also the maintenance of at least the spar buoys now kept by us under contract. I am satisfied that with the importance of the 14 foot channel, the contract system of maintenance is no longer suitable for these buoys. I understand the Railways and Canals department have built a steam tender for the maintenance of the new gas buoys. They would therefore be in a better position to maintain the whole service efficiently than this Department now is. If this department undertakes this service, a steam buoy tender and the services of a buoy engineer will be required, the same as in the river between Quebec and Montreal.

I would again draw your attention to the increased efficiency that would result from the maintenance of a serviceable lighthouse and buoy steamer on the upper lakes. With the rapid increase of steam traffic in these waters and the development of industries at all Canadian lake ports the necessity for this change in our system becomes yearly more urgent.

## GEOGRAPHIC NAMES.

Several questions with reference to the allotment, etymology, &c., of names of geographical features on our coasts were referred by this department to the Geographic Board for decision, and the help given by the board will doubtless lead to uniformity of usage, and prevent much confusion. Whenever any of these decisions affected existing charts, they were embodied in notices to mariners. The annual report of the Geographic Board, with a list of all decisions, is published as a supplement to the annual report of this department.

## HYDROGRAPHY

The hydrographic survey of the Canadian shores of the Great Lakes has made fair progress during the past season. Mr. Stewart with his assistants, Messrs. F. Anderson and R. E. Tyrwhitt, on the steamer *Bayfield*, completed the east shore of lake Huron from Stokes bay to Clark point, county Bruce.

I submit herewith (Inclosure C) his report of progress to October 31.

The steamer underwent no repairs last spring and is reported unfit for the exposed work on the lakes.

Last winter two fair sheets of the work completed between Duck islands and cape Hurd were prepared and sent to the hydrographer of the Admiralty for engraving. Owing to great pressure of work at the Hydrographic office, London, none of the new work on lake Huron has yet been published, although it has been used for correcting the general charts of the lake.

With any sort of reasonable weather there should be no difficulty in completing the survey of lake Huron this coming season.



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The new edition of the Georgian Bay and North Channel Pilot, referred to in last year's report, was issued August 15 last.

Mr. Stewart prepared hydrographic notes and sailing directions] of the careful surveys he made of Southampton and Pine Tree harbours, and these were embodied in notices to mariners. After the completion of his work on lake Huron this year he proceeded to North channel, where an uncharted rock had been reported by the keeper on Clapperton island. An examination of the locality showed that the reported new danger was an extension eastward of Robertson rock, already charted.

A plan of the entrance to South Baymouth, Manitoulin island, made from Mr. Stewart's hydrographic survey, was furnished the hydrographer of the United States navy, in July last, to show them the position of the South Baymouth range lights. They had this published as a neat plan in their notice to mariners No. 29 of 1900.

A chart of the west end of the Bay of Quinte, made from the undersigned's survey of 1893, was published last winter by the Admiralty, and with the sheet of the east end published the previous year, completes the large scale chart of this inside channel, from Kingston to Presqu'île. The long delay in publishing this chart was owing primarily to the pressure of work in the draughting room here; when the fair sheet was sent to England it was lost in the wreck of the *Labrador*; and lastly the cartographers of the Admiralty are always crowded with work.

Hydrographic notes respecting the following localities were published during the past year :—

*Atlantic coast*—Lunenburg harbour.—Shoal found and surveyed by Capt. S. Rolleston, H.M.S. *Tribune*.

Canso harbour, N.S.—Shoal discovered by ss. *Minia*.

Louisburg.—Corrections to St. Lawrence pilot, made by U. S. Hydrographer; notes respecting buoyage; also sailing directions for new range lights.

Strait of Belle isle. Shoal off Lark island searched for by Staff-Commander W. Tooker, H.M.S. *Gulnare* and reported non-existent.

*Gulf and river St. Lawrence*.—Dalhousie, N.B.—Position of buoys and churches, reported by Capt. F. R. Pelly, H.M.S. *Psyche*.

St. Lawrence ship channel.—Increase in width of dredged portions, between Ste. Croix and Cap Santé; and near Three Rivers; also lumps found in Lake St. Peter, reported by the Public Works Department after tests had been made by Mr. F. W. Cowie.

*Inland waters*.—Upper entrance to Soulanges canal described by the undersigned.

Port Dalhousie.—Compass-swinging ranges established by Staff-Commander Boulton not in existence.

Port Colborne.—Description of dredging under charge of W. G. Thompson, Esq.

West end of lake Erie. — Positions of two wrecks located by the undersigned.

*Pacific Coast*.—Telegraph Cove, Vancouver Island.—Surveyed by Capt. Walbran, D.G.S. *Quadra*.

Inner waters of British Columbia.—Notes made by Capt. Walbran.



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Benmohr rock, Trincomali channel, B.C., discovered by ss. *Benmohr*.

Stuart channel.—Details respecting False Reef reported by Capt. Walbran.

Off Entrance Island, B.C.—Shoals described by Commander C. H. Simpson, H.M.S. *Egeria*.

Seymour narrows.—Depth on Ripple rock, reported by Commander Simpson.

Johnstone strait.—Rocks in Blinkinsop bay, located by Commander Simpson.

Broughton strait.—Rock off Nimpkish bank, surveyed by Commander Simpson.

Bering sea.—Position of ice, reported by Captain Bucholz, ss. *Alpha*.

## SURVEY OF TIDES AND CURRENTS

Mr. W. B. Dawson's report of progress for the past year is annexed to this report. (Inclosure D.)

In this survey the series of principal stations has been maintained; and a further year of tidal record has been secured at seven commanding points on our eastern coasts, as well as from two tidal stations in British Columbia.

[Tide tables have been prepared and issued as before, but with several noteworthy improvements. With the tide tables for our principal harbours, a full series of tidal differences for the bay of Fundy is now included, which enables the time of the tide to be correctly found in a region where navigation is largely dependent upon it. The tide tables for Charlottetown and Pictou, in the Northumberland strait, have been extended to include the whole year, instead of eight months as formerly; which will be of benefit to winter navigation.] This change may also induce almanacs to reprint them, in place of the very inaccurate tables often published in the past. Tide tables for 1901 are about to be issued for two ports in British Columbia; based upon tidal record which has been in hand for some time, as the expense of making the necessary analysis and calculations could not before be met. These tables are for Victoria in the strait of Fuca; and Sand Heads at the mouth of the Fraser river, which is centrally situated in the strait of Georgia, and well adapted to serve as a port of reference for the harbours in that region. In this way, much better results will be secured than any heretofore available.

The accuracy of the tide tables for Quebec and St. Paul island have been improved by utilizing further records to extend the basis from which they are calculated. Several tide tables of local importance are also prepared annually.

A summary of the information regarding currents secured by the tidal survey during three seasons, was issued in June last, as a pamphlet entitled 'Currents in the Gulf of St. Lawrence, including the Anticosti region and Belle Isle and Cabot straits.' This is divided into two parts, (1) a description of the currents on the surface, as a mariner may expect to find them in each locality; and (2) the causes, as far as ascertained, which influence the currents in moving as they do; and the general circulation of the water in the gulf of St. Lawrence. This pamphlet was widely circulated, and 264 additional copies were also sent on request.

During the summer months, from May to October, tidal investigations were carried on by Mr. Dawson along the lower St. Lawrence from Quebec to Point de Monts. Six tidal stations were maintained during the season in that region, in addition to the two



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principal stations at Quebec and Father Point. The more important relations between the rise and fall of the tide and the turn of the strong tidal currents on the lower St. Lawrence have already been ascertained during the recent re-surveys of that region, on which the latest charts are based. The information obtained this season regarding the tide itself will now enable the time of the turn of the current to be determined also ; as without this, the relations referred to could not be practically utilized. It is in this that the work of this season will be chiefly valuable to navigation. With this object also, further observations of the currents were made at three important points in the vicinity of the Traverse, where they are strongest.

Respectfully submitted,

WM. P. ANDERSON,  
*Chief Engineer.*

December 20, 1900.

[INCLOSURE A.]

CHIEF ENGINEER'S DETAILED REPORT ON CONSTRUCTION AND  
MAINTENANCE OF LIGHTHOUSES AND OTHER AIDS TO  
NAVIGATION UP TO NOVEMBER 30, 1900.

To the Deputy Minister  
of Marine and Fisheries.

SIR —I have the honour to submit the usual annual report of work done in the construction and maintenance of aids to navigation for the eleven months ended November 30, 1900.

Lighthouses, fog alarms, buoys, beacons, and other aids to navigation throughout the Dominion of Canada are administered by the Department of Marine and Fisheries. The construction of new buildings and the more important repairs are under my direct supervision, the maintenance of existing stations is controlled by the several agents of the department, and the periodical inspection of the stations is made by inspectors resident in the different provinces, the agents in Prince Edward Island and British Columbia fulfilling the double duties. Much of the information contained herein is compiled from the annual reports of these officers.

The numbers and distribution of the several aids to navigation throughout the Dominion are shown in the following table :

DISTRICT.	Light-stations.	Lights.	Keepers.	Fog-whistles & sirens.	Fog-horns.	Fog-bells.	Fog-guns or bombs.	Whistling-buoys.	Bell-buoys.	Gas-buoys.
Province of Ontario.....	204	267	187	2	12	4	...	...	5	5
Light-ships.....	3	3								
Province of Quebec.....	123	172	145	4	8	1	8	...	...	11
Light-ships.....	7	7	...	3						(4with bells.)
Province of Nova-Scotia.....	181	193	191	10	6	2	1	21	17	
Fog-alarms.....	3									
Light-ships.....	1	1								
Province of New-Brunswick.....	99	124	95	4	8	1	1	5	4	
Fog-alarms.....	3									
Light-ships.....	2	2								
Province of P. E. Island.....	39	67	45	...	1	...	...	3	1	
Province of British Columbia.....	28	33	30	1	5	6	...	...	1	
	693	869	693	24	40	14	10	29	28	16

\* Light-ships and fog-alarms where there are no lights are in this column included in the total number of light-stations in the Dominion.



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Supplies for the lighthouse services are purchased in bulk, under contract, except in the case of articles of which only small quantities are required, in which case they are purchased locally in the open market. These supplies are distributed from the stores at each district headquarters, usually under the personal supervision of the Inspectors of Lights, who inspect the stations when delivering the supplies. They also arrange for all small ordinary repairs and the periodical painting of the buildings. These routine duties are not alluded to in describing the repairs executed at the several stations.

Work of construction and extensive repairs are usually executed under contract; minor repairs are done under the light-keepers' supervision, or by foremen employed in the several districts.

Light-keepers and fog-alarm engineers are expected to make any small repairs that can be reasonably expected of unskilled workmen, without charge, and are also called upon to do all painting required at their stations, being allowed some assistance when the buildings are so high as to require hanging scaffolds.

## ONTARIO LIGHTHOUSE DIVISION.

This division includes the lighthouses and other aids to navigation in that part of the province of Quebec lying west of Montreal, all those in the province of Ontario, and those on lake Winnipeg, in the province of Manitoba. It is under the direct management of the headquarters staff at Ottawa.

The number of lighthouses, lighted beacons and lightships maintained by the Dominion in the Ontario division, as above described, is 270, located at 207 different stations.

The number of light-keepers in this division paid directly by the government is 187, but in several cases assistants are employed by keepers and paid by them out of the allowance made by the government for that purpose.

There are in Ontario 2 fog whistles, 12 steam fog-horns and 4 fog-bells, operated by machinery, all located at light-stations, as well as 5 bell-buoys and 5 gas-buoys.

Besides the lights maintained by this department as above described, there are in Ontario the following aids to navigation: three lights on swing bridges, a system of lights on the Murray canal, maintained by the Department of Railways and Canals, 5 pairs of range lights on the Detroit and St. Clair rivers, maintained by the American vessel owners principally interested, 12 wharf lights maintained by the municipalities or corporations to which the wharfs belong, and two range lights maintained by local interests at Pine Tree harbour.

Six of these last described stations are aided by this department to the extent of being furnished with the necessary oil for their maintenance.

A steamer is chartered yearly for the supply of the light-stations on the river St. Lawrence and the great lakes, between Montreal and the head of lake Superior, and the lighthouses are supplied and the stations inspected on this trip, which occupies about seven weeks, by Mr. Patrick Harty, Superintendent of Lights. The lights on the Ottawa river and a few small lights on isolated waters, including lake Temiskaming, lake Nipissing, lake Simcoe and the bay of Quinte, were not inspected. The lights on Lake of the Woods have been superintended by Mr. M. Kyle, local agent of this department at Rat Portage.

## NEW AIDS TO NAVIGATION.

*Upper entrance to the Soulanges canal.*

*Canal lights.*—The piers at the upper entrance and the whole length of the canal along the north bank, are lined by bright electric arc lights, each of 2000-candle power, suspended from white poles at intervals of 400 to 480 feet.

*Temporary range lights.*—On the south extremity of the west pier, elevated 12 feet above the ground, and 18 feet above the ordinary lake level, a fixed red light has



been established. On the east side of the south end of the guard lock, 1,400 feet N. 38° E. from the front light, a similar light elevated 20 feet above the ground and 26 feet above the ordinary lake level, has been established. Both lights are shown from locomotive headlight lanterns standing on skeleton-framed towers.

The points of the shoals running out from the Coteau landing shore are being dredged off, and as the dredging progresses the back light will be moved eastward until, when the dredging is completed, it will stand 1,550 feet N. 51° E. from the front one and indicate the west edge of the dredged approach to the canal. It is intended to replace these temporary lights by lights shown from permanent iron towers.

*Red buoys.*—Two red spar buoys have been moored in 18 feet water to mark the easterly edge of the shoal water on the west side of the approach. These buoys will be moved farther west as the dredging progresses.

*Black buoys.*—Two black buoys have been established in 19 feet water to mark the north and south extremities of a shoal on the east side of the approach. It was proposed to remove the shoal marked by these buoys to canal depth when the buoys would be removed.

The above lights and buoys were established and are maintained by the Department of Railways and Canals.

#### *Toronto East Gap Fog Bell.*

A fog bell, operated by machinery, was last spring established at the front range lighthouse tower marking the east entrance into Toronto harbour.

The bell and striking apparatus stand on a platform fixed to the framework on the lake side of the tower, under the lightroom floor, at an elevation of twenty-five feet above the water level. The bell sounds single strokes with intervals of three seconds between them, or twenty strokes every minute.

The apparatus was purchased from Mr. W. E. Decrow, of Boston, Mass., and is of a new self contained type, the clockwork machine giving 10,000 strokes with a single winding.

The machine cost \$350, and the cost of setting it up, etc., was \$118.95.

#### *Temporary Lights at Port Burwell.*

The breakwater piers at the entrance of Port Burwell, on the north shore of lake Erie, are being extended by the Department of Public Works, and it is understood that while the work is going on, temporary lights are being maintained on the outer end of both piers; that on the west pier is shown from a lantern suspended from a post at a height of eight feet above the level of the lake; the other is maintained at a height of five feet above the lake level over a sunken crib which forms the sub-structure of the pier extension.

It is intended to keep the lights in position during the continuance of the work. In very stormy weather it may not be possible to light the lamps.

#### *Lighting of Pelee Passage.*

The lighthouse and fog alarm at Pelee spit (the dummy), in the westerly part of Lake Erie, were destroyed by fire on April 17, 1900. The fire is thought to have been set by a lamp thrown down by displacement of the wall of the fog alarm building by the weight of a heavy sea running at the time. The principal keeper was temporarily pinned down by fallen timbers, and he and his assistant narrowly escaped destruction. On April 21 a temporary fixed white light, shown from an anchor lantern, hoisted thirty-seven feet above the lake on a mast, was shown from the wreck of the lighthouse pier, and has since been maintained, but has not been satisfactory, as it was often impossible to land on the pier, and the station is a considerable distance from the track taken by modern deep draught steamers. Although the steel and concrete pier was left by the fire in fairly good condition it was thought best not to repair it to receive another



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lighthouse, as a new pier erected either on South-east shoal or on the Middle ground would be better located to meet the requirements of lake shipping.

Plans were accordingly prepared for the construction of a pier to receive a lighthouse, on the middle ground of Pelee passage, and the work of building was begun at Amherstburg in August. The foundation will be a frustum of a cone in steel, filled with stone and concrete, and protected by a polygonal oak crib. It stands on a grillage, and is ready for sinking on the opening of navigation next year. The work has been done under supervision of Mr. W. H. Noble, by days' labour, and the expenditure to date has been \$10,429.79.

The middle ground was selected by the department as the site for the new lighthouse in preference to South-east shoal, because vessels can shape a course directly for it from both directions, and because it is doubtful if a stable foundation could be obtained on the shifting sand of South-east shoal.

*Light on Stag island shoal.*

A pole light, established on the south end of Stag island shoal, River St. Clair, was put in operation in July, 1900.

The light is shown from a lens lantern, hoisted on a mast with a small shed at its base, the mast and shed painted white; they stand upon a platform, built on a pile foundation. The platform is elevated 4 feet above the summer level of the river, and the mast is 7 feet high. The piles are driven in 8 feet water a short distance north of the spot hitherto marked by the United States lighthouse board by a middle ground spar buoy.

The light is fixed white, elevated 10 feet above the level of the river. The illuminating apparatus consists of a pressed glass lens.

The piles were driven and the post erected under contract by Mr. J. N. Gibb, of Wallaceburg. His contract price was \$92.75.

*Midland Range Lights.*

The two pairs of beacons described in last year's report as leading into Midland harbour, were last summer replaced by two pairs of range lights, as follows:—

*Brebeuf range front light.*—This is shown from the tower removed from Gin island, which is no longer lighted, as previously indicated.

The lighthouse tower is a square wooden building with sloping sides, painted white, surmounted by a polygonal iron lantern painted red. It is 36 feet high from its base to the ventilator on the lantern. It stands on the north end of Brébeuf island, the site being a bare rock 8 feet above the water.

The light is a fixed white catoptric light, elevated 40 feet above water level.

*Brebeuf range back light.*—This light is shown from a tower erected on the west shore of Beausoleil island, 2,400 feet S. 86° E. from the front one.

The tower is a square wooden building with sloping sides, painted white, with a red roof. The light is shown from a window at the top of the tower. The building is 42 feet high from its sills to the top of the ventilator on the lantern. The light is a fixed white catoptric light, elevated 40 feet above water level.

The above described two lights in one, lead in from outside Bennet bank to the alignment of the Midland point range, leading 750 feet south of the black buoy off Giants Tomb lighthouse, and 500 feet north of the red buoy off Sawlog point.

*Midland point range front light.*—This is a fixed white light elevated 31 feet above water level. The illuminating apparatus is dioptric of the seventh order.

The light is shown from a tower erected upon the site of the beacon which it replaces on the beach 6 cables S. 54° E. from Sucker creek point, and northerly from Midland point.

The tower stands on a cribwork pier 4 feet high, and is a square wooden building with sloping sides, painted white, surmounted by a square wooden lantern painted red. It is 33 feet high from its base to the ventilator on the lantern.



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*Midland point range back light.*—This is a similar light to the front one, shown from a similar tower, erected upon the site of, and replacing, the back range beacon, on the beach, 3,000 feet S.  $17^{\circ}$  E. from the front one. The tower is 43 feet high and the light is elevated 41 feet above water level, and should be visible 11 miles from all points of approach by water.

These two lights in one lead in, from the intersection with the alignment of the Brébeuf range lights to within half a mile of the front tower, where the lights should be opened on the starboard hand. The shore here is bold and may be kept close aboard until Midland point is rounded.

The above work was carried out by day's labour, under the supervision of Mr. W. H. Noble, at a total cost of \$4,137.65.

#### *Re-establishment of light on Michael point.*

On June 1 the light formerly maintained at Michael point, south shore of Manitoulin Island, lake Huron, and which was discontinued in 1899, was again put in operation.

The lighthouse stands on the west extremity of the point forming the south shore of Michael bay. It is a square wooden building, painted white, surmounted by an octagonal iron lantern painted red. It is 25 feet high from its base to the vane on the lantern.

The light is a fixed white catoptric light, elevated 40 feet above the level of the lake, and should be visible 11 miles from all points of approach.

A hand fog horn will be used at the lighthouse, to answer signals from vessels.

#### *Blind River range lights.*

Two range lights to lead in to the wharfs and mills at Blind river, on the north shore of the North channel, lake Huron, in the district of Algoma, were put in operation on October 24, 1900. The lights are red incandescent electric lights, strengthened by reflectors in small head light lanterns. In the event of failure of electric supply at any time, they will be replaced temporarily by oil lights exhibited from square tubular lanterns.

The front light is located on the sand beach, east of the wharfs. The lantern stands on top of a post 15 feet high. The light is elevated 16 feet above the level of the water.

The back lantern stands on a shelf on a post of the veranda of the office of the Michigan Land and Lumber Company, and is distant 730 feet N.  $24^{\circ}$  W. from the front light. It is elevated 27 feet above the water.

The two lights in one lead into Blind river clear of Campana shoal on the port hand, and clear of all shoals in the approach. There are  $11\frac{1}{2}$  feet of water with soft bottom everywhere and a wide channel on the line of range.

The outer end of the east wharf is indicated by a fixed white incandescent electric light shown from a similar lantern, erected on a pole maintained by the Michigan Land and Lumber Company. As soon as this light bears north-west, vessels can head for the wharfs inside of Suzanne island. There are  $10\frac{1}{2}$  feet water at the wharf head.

These lights were established under an arrangement made between the Chief engineer of this department, who visited the place and located the lights, and the Michigan Land and Lumber Company. They furnish the poles and wiring for \$20, and receive \$80 per annum for maintaining the two lights. The light on the wharf they maintain at their own expense.

#### *Stribling point range lights.*

On October 10, 1900, range lights were established at Stribling point, on the north end of St. Joseph island, in the district of Algoma, to replace the private lights heretofore maintained by the Lake Carriers' association.



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The lights are fixed white catoptric lights, shown from lanterns placed in front of the day beacons already in existence.

The targets of the day beacons are diamonds or lozenges, 6 feet square, painted white. The front target has a vertical black stripe through the middle of the diamond. It stands just inside the shore line, on low land.

The light is elevated 11 feet above the water.

The back light is situated on the hillside, 1,446½ feet S. 68° 17' 40" E. true from the front light. It is elevated 44 feet above water.

The two lights in one, bearing S. 68° 17' 40" E. true, lead through the middle of the dredged channel of the Middle Neebish from its intersection with the alignment of the lower Hay lake range lights to its intersection with the alignment of the Harwood point range lights.

The arrangements for assuming the care of these lights were made by the Chief Engineer, when he inspected the river in September, and were carried out by Mr. J. C. Boyd, Superintendent of the Canadian canal at the Sault, to whom this department is indebted for valuable assistance.

The cost of establishing these lights was \$83.50.

## IMPROVEMENTS AND PRINCIPAL REPAIRS AT EXISTING STATIONS.

*Lake St. Louis.*—The names of the three lightships have been painted on their topsides, in white letters, as follows:—On No. 1, the name "Lachine"; on No. 2, "Lake St. Louis No. 2"; on No. 3, "Chateauguay."

*Green Shoal.*—As indicated in last year's report, this lighthouse in the Ottawa river, and the pier on which it stands, have been completely rebuilt. The new pier, which is built on the foundation of the old one, is a frustum of a cone, of steel, filled with concrete and stone, and is painted brown. It is 20 feet in diameter at base, 14 feet in diameter at top, and rises 23 feet above summer level of the river. On it stands a square wooden tower, with sloping sides, painted white, surmounted by a square wooden lantern painted red. The tower is 21 feet high from the deck of the pier to the vane on the lantern.

The light is a fixed white light, elevated 38 feet above the summer level of the river. The illuminating apparatus is dioptric of the seventh order.

The work was done by the department, by day labour under the foremanship of Mr. W. H. Noble, during the winter and spring of 1900. The filling of the pier with concrete was postponed until the river had reached its lowest stage in the autumn of 1900, and was done under the supervision of Mr. B. H. Fraser.

The total cost of the work has been \$2,480.60.

*Gananoque Narrows.*—A hand fog horn has been established at this light station, to answer signals from steamers in the vicinity of the station in thick weather.

*Snake island.*—The lighthouse referred to in last year's report was put in operation on the opening of navigation, 1900, and the old stone lighthouse has been taken down.

The new tower is an octagonal wooden building with sloping sides, painted white, and surmounted by an octagonal iron lantern painted red. It is 39 feet high from its base on the pier to the ventilator on the lantern, and the top of the steel pier is 6 feet above the level of the water.

The light is fixed red, elevated 38 feet above the level of the lake. The illuminating apparatus is dioptric of the 7th order.

*Port Dalhousie illuminating apparatus.*—It has been impossible yet to complete arrangements for the occulting light proposed to be established at this station, and the light still remains fixed red. Last season, this fixed red light was improved by substituting a dioptric lens of the 7th order, strengthened in the line of range by a lamp and reflector, for the smaller dioptric apparatus temporarily used. Negotiations are in progress with the local producers of electric light for the installation of an occulting light at the station.

*Kingsville.*—In consequence of the temporary demolition of the outer end of the east breakwater pier, in connection with repairs now in progress, it was found necessary,



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on October 17, 1900, to temporarily discontinue the exhibition of the fixed red light which formed the outer light of the range.

*Pine Tree harbour.*—The private range lights established in 1895, at Pine Tree harbour, on the lake Huron shore of the county of Bruce, have been improved by the substitution of inclosed towers for the masts previously used.

The towers are square wooden buildings and are painted white with red tops. The front range building is 28 feet, the back one 34 feet, high, from base to vane. The lights are fixed white, catoptric, the outer one elevated 26 feet, the back one 32 feet, above the level of the lake. They should be visible 10 miles in the line of range.

The front tower is built on a rock on the north-east side of the harbour, opposite the saw mill; the back one stands on shore, 350 feet N.E.  $\frac{1}{2}$  N. from the front one.

The work was done by the Southampton Lumber Company, who maintain the lights at their own expense, this department furnishing the illuminating apparatus and oil.

*Flower Pot island.*—A dwelling house for the keeper was built last summer, by day labour, under the foremanship of Mr. C. Dobson, of Penetanguishene, and under the general supervision of Mr. W. H. Noble. The dwelling house and other work done cost \$1,396.93 and complete the equipment of the station.

*French River.*—On August 15, 1900, the light shown from the lighthouse on Lefroy island, being the front light of the French river range, Georgian bay, was changed in character from fixed white to fixed red, so that it might be distinguishable from the bright electric lights at the mills. A seventh-order dioptric lens was at the same time substituted for the inferior lens previously used.

*Sailors Encampment.*—The two red lights, hitherto maintained in the axis of the old cut at Sailors Encampment, known as Sailors Encampment upper range (Canadian) lights were, on September 17, 1900, discontinued, and the axis of the Sailors Encampment new cut, marked at its lower end by the Pilot island (United States) range, was marked at the upper end by two fixed white lights established on the sites of the day beacons on Rains hill, St. Joseph island, at the upper end of the cut.

The front light is situated on the east side of the shore road, about 600 feet S.  $30^{\circ}$  E. true from the old front light, and is shown from a lantern elevated fifty feet above the water on a mast. The illuminating apparatus is catoptric.

At the foot of the mast, which is seventeen feet high, is a diamond shaped day beacon painted white, with a vertical black strip through the middle of it.

The back light is situated 648 feet N.  $14^{\circ} 35'$  E. true from the front light, and is shown from a similar lantern elevated seventy feet above the water. At the foot of the mast, which is twenty-two feet high, is a diamond shaped day beacon painted white. Going up the river, these two range lights kept in one ahead, indicate the middle of the dredged channel from Mud lake turning gas buoy to the alignment of Point of Woods range lights.

This change was made at the request of the Lake Carriers' association, to mark an improved cut dredged by the United States government.

This change in channel will render it unnecessary for us to continue the maintenance of the pair of range lights on St. Joseph island known as the Sailors Encampment lower range, and although they were kept in operation up to the close of navigation in 1900, they will not be relit next spring.



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## MINOR REPAIRS at Stations in Ontario, 1900.

Light Station.	Repairs.	Cost.
Allumette island.....	New boat.....	\$ 40 00
Aylmer island.....	Repairs .....	6 60
Baskins wharf.....	Cutting brush between range lights and building a small shelter shed.....	44 15
Battle island.....	Shingling dwelling house and kitchen .....	37 71
Bois Blanc.....	New boat.....	50 00
Beauharnois.....	Painting range lights.....	8 00
Belleville.....	" tower.....	16 25
Burlington Beach.....	Repairs to light, towers and dwelling.....	16 42
	" boat .....	10 00
Caribou island.....	General repairs to fog-horn and pier.....	91 00
Cape Robert.....	Repairs to tower and dwelling .....	99 85
	New boat.....	34 00
Chantry island.....	Whitewashing tower and dwelling.....	45 00
	Repairs to boat .....	12 00
	Boat rollers.....	5 00
Christian island.....	Repairs to tower and dwelling.....	15 28
Clapperton island.....	New boat.....	35 00
Cape Robert.....	Repairs to lighthouse and dwelling.....	71 10
False Ducks.....	Whitewashing tower .....	10 00
Flower Pot island.....	Repairs to tower and building fence.....	52 00
Gananoque Narrows.....	New boat.....	47 00
Goderich.....	" .....	30 00
Great Duck island.....	" .....	150 00
Hooper island.....	Repairs .....	28 15
Jones island.....	" to tower.....	9 20
Killarney .....	" dwelling.....	20 60
Kincardine.....	" lighthouse and dwelling.....	276 78
Barrie field .....	" tower.....	25 70
Lachine lightship.....	Lettering lightship.....	4 20
	Repairs.....	11 00
Lightship No. 2.....	Repairs to vessel.....	19 50
	Lettering .....	8 90
	New boat.....	18 00
Chateauguay lightship.....	Repairing vessel.....	17 00
	Lettering vessel.....	6 60
	New boat.....	18 00
Middle island.....	Painting lighthouse and dwelling.....	24 00
Mohawk island.....	Repairs to tower and dwelling .....	8 64
Mississagi island.....	Painting lighthouse and dwelling.....	7 00
	Repairs to light and dwelling .....	100 52
McKies point.....	Repairs to dwelling and lighthouse.....	20 50
McTavish point.....	Repairs to pier and light.....	27 00
Nigger island.....	New boat.....	30 00
Peninsula harbour.....	Painting .....	8 75
	Repairs .....	15 90
Pelee island .....	Painting.....	5 00
	Repairing boat.....	5 00
Point à Cadieux .....	" dwelling.....	6 94
	" boat.....	5 00
Point au Baril.....	" light and dwelling.....	51 00
Point aux Anglais.....	" light tower.....	86 00
Pelee reef.....	Repair to light tower and pier.....	144 90
Point Pleasant.....	Repairs to lighthouse, dwelling house and barn.....	80 21
	Painting light tower.....	25 00
Port Colborne.....	Repairs to fog horn and light tower.....	25 41
Port Credit.....	" light tower.....	54 58
Presquile, Main.....	Painting tower.....	9 75
Rondeau.....	Repairs to breakwater.....	18 38
Rosseau.....	" lighthouse and pier.....	105 44
	New boat.....	32 00
Salmon point.....	Repairs to dwelling.....	24 58
Sault Ste. Marie range.....	Painting lights.....	28 00
St. Anicet .....	Repairing boat.....	3 55
St. Placide.....	Painting towers.....	7 50
Strawberry island.....	Repairs to light and dwelling.....	14 33
Boyd island.....	Repairs to dwelling house foundation.....	125 00
	Balance on breakwater.....	30 00
Sulphur island.....	Repairing dock and building boat-house.....	25 00
	Repairs to boat.....	7 00
Snug harbour.....	Repairing light tower and dwelling.....	9 00



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## MINOR REPAIRS at Stations in Ontario, 1900.

Light Station.	Repairs.	Cost.
South Baymouth.....	New boat.....	\$ 33 00
Thunder cape.....	Painting.....	6 00
	New boat.....	135 00
Thessalon.....	Building boat-house.....	7 00
	New boat.....	40 00
South Bay point.....	".....	30 00
Wellers bay.....	Repairs to dwelling.....	46 65
Wolfe island.....	" " and tower.....	11 95
Western islands.....	Repairing fog horn building.....	87 25
	Painting.....	15 00
Bamford ".....	Repairing light and dwelling.....	4 06
Port Dalhousie.....	" light tower.....	25 00
Red Rock.....	" light and dwelling.....	127 48
River Thames.....	" dwelling house.....	19 00
	" boat.....	18 00
Cove island.....	Whitewashing.....	20 50
	Repairing lighthouse.....	42 05
Channel island.....	Hardware.....	117 44

## BUOYS AND BEACONS.

*Detroit river.*—During the past season the buoys maintained in river Detroit were damaged by passing steamers to an extent previously unknown, and it is probable that, in consequence of the increase in number and size of steamers navigating the river this additional expense and difficulty in maintaining the service efficiently will increase rather than diminish. The chief engineer tried to secure the co-operation of pilots in protecting the buoys through the Lake Carriers' Association and the columns of the *Marine Review*. These buoys are maintained by the light-keeper at Bois Blanc island, and although the cost may be somewhat greater than if the work were done by contract, the promptness with which losses are made good, and buoys kept accurately in place, gives great satisfaction to mariners.

The gas buoys in Pelee passage were placed, tended and removed as in previous years by the D.G. fisheries cruiser *Petrel*, and were replenished with gas as required by the U. S. lighthouse tender *Haze*, by an arrangement made by the Lake Carriers' Association.

A tow line from the ss. *Queen City*, carried away the superstructure and lantern of the south-east shoal gas buoy, which were replaced at a cost of \$627.64. A bill for this amount was paid by the owners of the steamer immediately on presentation, a recognition of responsibility by a foreign owner deserving of all commendation.

*Limekiln crossing.*—In September, 1900, the eastern edge of the dredged cut through Limekiln crossing, in the river Detroit, above Amherstburg, was marked by three red spar buoys moored respectively at the upper end, in the middle and at the lower end of the Canadian side of the dredged deep channel. The buoys are moored in 20 feet of water, as close to the rock side of the cut as possible, and this side of the cut should be favoured by upward bound vessels.

These aids were placed for the benefit of the heavy draught vessels using the channel, at the request of the Lake Carriers' Association, and will be maintained by the lightkeeper at Bois Blanc island, who maintains all our Detroit river buoys.

*Southampton.*—The following spar buoys have been placed in Southampton harbour by Mr. W. J. Stewart to mark dangers found by him during his hydrographic survey of the harbour :

A red spar buoy moored in 15 feet water, close on the west side of a boulder, with 8½ feet water upon it. It bears S.W. ½ S. 3,400 feet from the outer end of the railway pier or short pier on the east side of the harbour.



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A black spar buoy, moored in 15 feet water close on the east side of a boulder with 9 feet water upon it. It bears N.W.  $\frac{1}{4}$  W. 775 feet from the west end of the railway pier.

*Midland*—A notice to mariners was issued fully describing all the buoys in the approaches to Midland from the main waters of Georgian bay.

*Lone rock bell bouy*—This buoy broke from its moorings in October, 1900, and will not be replaced till the opening of navigation in 1901.

*Seguin bank buoy*—The gas buoy on Seguin bank, a very exposed situation in the Georgian bay outside of Parry Sound, was dismantled by ice in the autum of 1899, and could not be made ready for placing on the opening of navigation this year. It was therefore temporarily replaced by a large black spar buoy until it was placed on its station on May 23, 1900.

After giving excellent service all season it was driven from its station by storm on November 14. New moorings and illuminating apparatus will be required before it can be placed next spring.

*Hooper island gas buoy*—This buoy was carried away by the violent storm of November 21; it was immediately recovered and replaced.

*Day marks on Rainy river.*—The channel of Rainy river, which forms part of the International boundary line between the district of Rainy river, Algoma, Ontario, and the state of Minnesota, has been marked in the stretch between the Long Sault rapids and Fort Frances, by fourteen pairs of day beacons and nineteen spar buoys.

The beacons consist of wooden posts, with targets attached, either diamond shaped or square, painted either white or white and black. They are placed in pairs, each pair showing the alignment of the middle of the channel in its vicinity. Two pairs of these beacons were erected, some years ago, at Long Sault rapids, by the owners of the *Keenora*; the pair at the wing dam was established by the Department of Public Works; all the other beacons and buoys were established this year by this department.

The buoys are wooden spars, coloured to correspond with International rules governing buoyage.

This work was done, under contract, by Captain Clifford Lewis, for the sum of \$200.

## QUEBEC LIGHTHOUSE DIVISION.

This district extends from Montreal to the end of the strait of Belle Isle, covering a coast and river service of over 1,200 miles, comprising all the lighthouses in the Richelieu river and Lake Memphremagog, as well as all aids to navigation in the river St. Lawrence, Saguenay river, Baie des Chaleurs, gulf of St. Lawrence, strait of Belle isle, north and west coasts of Newfoundland and Labrador.

This division is under the control of Mr. J. U. Gregory, agent of the Department of Marine and Fisheries, at Quebec, who is also shipping master, attends to the requirements of the British Board of Trade in matters of shipwrecked and distressed seamen and casualties at sea, is receiver of wrecks, supervisor of wharfs, a fisheries officer for the province of Quebec, and superintendent of the signal service.

The agent's staff consists of Mr. L. A. Blanchet, chief clerk and accountant, and deputy shipping master, Mr. Geo. D. O'Farrell, lighthouse inspector, Mr. Alphonse Hamel, clerk and Mr. L. L. Dubé, storekeeper and wharfinger.

The workshops with a large stock of models of various kinds needed for the service, are under Mr. Ernest Roy, master carpenter, and Mr. Narcisse Dufour, master-ship-smith. The gas works are under Mr. G. Bélanger.

The steamers at the disposal of this agency during the past year were the *Druid*, which attended to gas and other buoys, as well as beacon service below Quebec as far as Father point, and the steamer *Aberdeen* which supplied the lights in the river and gulf of St. Lawrence, strait of Belle isle and Baie des Chaleurs. The lights above Quebec are supplied by passenger steamers or by rail as proves most economical and convenient.

There are in this division 179 lights, at 123 stations, 7 lightships, 3 of which are supplied with powerful steam fog whistles, one powerful first order siren blown by



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compressed air, 8 explosive bomb signal stations in connection with lights, 4 steam fog whistles and 8 steam fog horns; 11 gas buoys, 4 of which are supplied with bells, 170 wooden buoys and 59 beacons.

#### NEW AIDS TO NAVIGATION.

##### *Pointe à Basile Range Lights.*

Two range light buildings have been erected at Pointe à Basile, on the south shore of the river St. Lawrence, above Quebec, which, in one, give the best channel from Pointe Aubin to Confederation point, and give a good lead over St. Augustin shoal with a least depth of 24½ feet water. Pending the completion of the range light buildings temporary lights, put in operation for the first time on October 31, 1900, were maintained.

The front light was shown from an anchor lens lantern standing on the framework of the front range light tower, which is being built on the high ground of Pointe à Basile, 260 feet east from the extremity of the point.

It was elevated about 80 feet above high water mark, and should be visible 10 miles from all points of approach by water.

The back light was shown from a reflector lantern standing on the framework of the back range light building, which is erected 4,100 feet E.  $\frac{1}{2}$  S., from the front one. It is elevated about 200 feet above the water, and should be visible 10 miles in the line of range.

Permanent lights will be shown from the new light buildings on the opening of navigation next year.

The buildings were put up by days' labour, under the supervision of Mr. E. Roy, foreman carpenter of the Quebec agency, at a cost of \$1,076.97.

##### *Range Lights at Oak Point.*

The range lights formerly maintained on Oak point, Restigouche river, below Campbellton, in the county of Bonaventure, were re-established on June 30, 1900, to accommodate the increase of shipping using the Restigouche.

They are fixed white catoptric lights, shown from white square wooden towers with sloping sides, each 22 feet high from the base to the ventilator on the lantern.

The front tower stands on Oak point, near its west extremity. The light is elevated 52 feet above high water mark.

The back range tower stands on the hill, 2,231 feet N. 68° 30' E. from the front light. The light is elevated 121 feet above high water mark.

The two lights in one, bearing N. 68° 30' E. lead from the intersection with the alignment of the Campbellton range on the south, or New Brunswick side of the river, diagonally across the river to the channel on the north or Quebec side.

The channel across the middle ground, marked by the range, is partly dredged, and the ruling depth on it is 11 feet at low, or 21 feet at high water, ordinary spring tides. It is intended to increase this depth 6 feet by dredging.

#### AID TO NAVIGATION DISCONTINUED.

*Pointe aux Orignaux.*—From the opening of navigation this year the hand fog-horn maintained previously at this station was discontinued.

#### PRINCIPAL REPAIRS AT EXISTING STATIONS.

*Anticosti, South-west point.*—The house of refuge for wrecked mariners and the oil-store were repaired and painted. The tower was also painted two coats, the work being done by a workman sent from Quebec, as authorized, after he got through with repairs authorized at the West Point lighthouse.



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On October 25, 1899, Mr. J. A. Tremblay, provincial land surveyor, acting on instructions from the Department of Public Works, surveyed an acre of land around the lighthouse. The Public Works Department bought an acre of land at this station in November, 1889, from the proprietors of Anticosti, for telegraph purposes, which had not been located. They have a house situated about 600 feet from the lighthouse, built in 1881, for a telegraph station, where, their acre should have been placed; at present, their house is not on the acre surveyed. The agent suggests that the Public Works Department obtain this lot from Mr. Menier in place of the other, an exchange that should be easily effected.

*Anticosti, West Point.*—The repairs authorized at this station, viz., new floors in dwelling, repairing and reglazing windows, etc., were attended to by a workman sent from Quebec for the purpose, who also repaired the explosives magazine and stairs in the tower, and assisted the keeper to paint the tower and additional buildings. Some iron protection straps were bolted on the corners of the wharf, the necessary material having been purchased locally.

During a severe storm in April, 1900, the residence caught fire, caused by a defective chimney, but the fire was extinguished with little damage. The keeper was allowed \$10 for repairing same, as well as refastening shingles on buildings. Total expenditure, \$165.

Mr. Menier, proprietor of the Island of Anticosti, has had a surveyor mark off the government property at this place, which is one acre purchased by the Department of Public Works. The magazine for storing explosives, the house of refuge for wrecked mariners and one store-house, are outside the limit of the government property marked off by the surveyor.

This same remark is applicable to South-west Point, South Point and Heath Point of Anticosti light stations, where, according to Mr. Menier's surveyor, some government buildings are beyond the government property.

*Bird Rocks.*—The coal supplied to this station was formerly conveyed in barrels and piled up on the island; it was subject to exposure, as the barrels became decayed by alternate drying and wetting, and some of the coal scattered about, especially during stormy weather, and the keeper experienced considerable difficulty in collecting it in winter, when covered with snow.

A coal shed, 12 feet by 17 feet, to put it under cover, was built in our shops in Quebec, and erected by the keeper; cost, \$100.

A new block for the hoisting gear, and a new hoisting box, were also supplied. Sundry small repairs to the tower and other buildings were attended to by the keeper, with help of his assistants, and material landed from the supply steamer.

*Cape Bauld.*—A water tank, and a chimney cap for the chimney of the dwelling were sent down to this station by the supply steamer.

A new flag staff was also sent to this station and erected by the keeper, with help of the crew of the *Aberdeen* as authorized.

Balance of repairs commenced last season, viz.: repairs to the fog alarm building, which was also painted; as well as the tower, dwelling and new oil store, also repairs to the engine house, doors and windows begun last year were completed by a workman sent from Quebec for that purpose. Total expenditure, \$106.

*Cape Norman.*—A small building 28 x 12 feet, for sheltering coal, was purchased in the locality by the keeper, and erected near the fog alarm building. This building, in addition to the present coal bin and coal shed, will afford ample room for the ordinary coal supply. One hundred and twelve tons have been delivered by a schooner from Sydney, C.B.

Some repairs to the fog alarm building were attended to at a cost of \$12.

A new flag staff was made in the department workshop, in Quebec, and sent down by the supply steamer to the station, where it was erected by the crew of the *Aberdeen*. The keeper has reported that the signal flags, supplied him last season, proved quite useful in answering inquiries from passing steamers, especially in the case of the steamer *Scotsman*, wrecked on Belle Isle, some of the cargo of which floated around the vicinity.



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The authorized repairs, viz. : wainscotting of rooms and new floors were attended to by the keeper, with local assistance. Total expenditure, \$119.

*Cape Ray.*—The following repairs were made at this station, under the supervision of the light keeper, Mr. E. H. Rennie, viz. : wainscotting rooms in dwelling, new floor placed in oil store, and repairs made to the one in the fog alarm building. The road leading to the lighthouse was also repaired, and side drains cleared away. The tower and other buildings were painted by the keeper with local assistance ; the necessary material having been sent by the supply steamer from government stores in Quebec. Total expenditure \$76.80.

*Cape Rosier.*—With reference to the operation of the fog alarm at this station, the keeper stated that, by actual testing, the whistle is much stronger than the horn. Under the circumstances, the use of the whistle for the regular alarm has been decided upon, reserving the horn in case of accident to the whistle.

A new boiler has been provided for this station, to replace the whistle boiler. Arrangements are being made to have the two good boilers placed in the same building and have them fitted so that either boiler may be used with either sound producing apparatus.

Owing to some delay on the part of the contractors to deliver the new boiler in time for the last trip of the *Aberdeen* in the fall of 1899, the lighthouse keeper, Mr. Eugène Costin, who is a practical engineer and boiler-maker, repaired the old boiler so as to enable it to serve until this summer's first trip, which was very satisfactory under the circumstances, and is another evidence of the great necessity of having practical mechanics in charge of steam fog-alarms.

The keeper was allowed \$4 to put sky-lights in the roof of the fog alarm building, and \$18 to procure in the locality the necessary material to repair the building itself ; the labour having been performed by the keeper and his assistant. A sum of \$4 was also authorized to repair the ceiling in one of the rooms of the dwelling ; \$10 for a strong new door in the fog alarm building, and \$4 for shingling. A new smoke-stack for the alarm boiler was made in the department's shop in Quebec, and sent down by the supply steamer. Total expenditure \$87.29.

*Caribou River.*—The front range lighthouse was destroyed by fire on July 7, 1900. It was at once replaced by a temporary pole light. The back range lighthouse was upset by a gale on September 3, 1900, but immediate steps were taken for continuing the maintenance of the light.

*Crane Island.*—Considerable trouble with the spring of the flashing apparatus in use at Crane Island lighthouse was experienced early in the spring of 1900. A mechanic from Quebec was sent down on the D. G. S. *Druid* to remedy the trouble ; but the light soon became defective again. This light is eclipsed by a revolving plate run by clockwork, the principal spring of which was the cause of the trouble ; and, as it was liable to give out at any moment, a complete set of new springs was procured from Messrs Chance, Bros. & Co., the makers of the apparatus, and the light put in order.

*Eboulements.*—The illuminating apparatus was improved by installing a pressed glass lens with duplex lamp in the place of the ordinary tin lantern previously used.

*Etang du Nord.*—The following repairs were made at this station, during last season, viz. :—The tower, dwelling and other buildings were painted by the keeper, with local assistance, at a cost of \$15. The dwelling, was resingled, and a new floor was laid in the kitchen annex ; the new porch and portion of the store-house were also resingled ; new doors and windows put in, &c. The necessary material was sent from Quebec by the *Aberdeen*, and the work done by the keeper with the assistance of a local carpenter at a total cost of \$91.84.

*Green Island.*—This is the oldest station in the whole district, and it is not surprising that repairs should be needed to such portions as give out from time to time. The dwelling was much in need of repairs, and it was decided to clapboard the same, as well as the kitchen annex ; also putting in two new floors in rooms and passage. The work was done by contract by Mr. Zephirin Ouellet, for \$171.30.

*Greenly Island.*—The steam piston of one of the fog-horns was brought up to Quebec, trued up, and the whistle valve also repaired, and returned to the station by the supply steamer.



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The lake supplying water to the tanks for the fog alarm becomes dry during the summer, but a large wooden tank and the two large iron tanks recently taken down to the station will prevent any shortage of water.

A new flag-staff was procured and erected by the keeper for the sum of \$25 ; some of the guys of the old mast being utilized for the new one. A small building was made in the department's shops in Quebec and sent down by the *Aberdeen*. The keeper put it up at the foot of the signal mast to keep the flags in, and as a shelter.

Another small building, about 8 x 10 feet, was also required by the keeper. It was made in panels in our shops, sent down by the supply steamer, and erected by the keeper.

The tower, dwelling and other buildings were painted by the keeper, with local assistance, and the work satisfactorily performed, the necessary material having been forwarded from Quebec by the supply steamer. Total expenditure \$251.53.

*Ile à la Bague*.—The pier under the movable tower at Ile à la Bague was much injured by the ice in the spring of 1900, necessitating the renewal of the top tier of timber, also deal sheathing and iron strapping. The work was done under contract by Mr. O. Mercier, for \$196.

*Lower Traverse Lightship*.—This vessel was hauled up on the marine ways during the winter of 1899-1900, and her bottom was scraped and painted.

The boiler and fog whistle machinery were examined by Mr. Stevens, inspector of government steamers. The boiler was found in good condition for its age. The iron pipes leading from boiler to top and bottom of gauge glass and test cock column were worn out and required to be renewed. The only other repairs were the usual overhauling and touching up of the cocks and valves.

The operating engine and pumps were thoroughly overhauled and parts adjusted. Total expenditure \$647.26.

*Maquereau Point*.—A sum of \$100 was allowed for the boring of a well, as there was much difficulty experienced in carting the water required to the lighthouse. The work was entrusted to Mr. H. Robichaud, of L'Anse aux Griffons, and satisfactorily carried out.

The dwelling required reshingling. The keeper procured the necessary material on the spot, and was allowed \$5 for assistance to do the work. One of the rooms in the dwelling was wainscotted, and the oil store repaired. Total expenditure \$157.55.

*Matane*.—A portion of the clapboarding of the lighthouse was renewed at a cost of \$16.25. A stable and barn have been built by the keeper at his own expense, on the government property, as authorized.

The former keeper, Mr. Desjardins, last fall removed from the government property the buildings belonging to him.

A new lantern has been provided for the pole light.

*Perroquets*.—A suitable boat was provided for this station. Being unable to procure one on the Labrador Coast, the keeper was authorized to purchase one at the Magdalen Islands, the cost of which, including rigging complete, amounted to \$60.50.

With regard to the renewal of floors in the dwelling, the keeper could not get a man in the locality to do the work. Consequently, a carpenter from Quebec was sent down by the supply steamer.

*Pointe aux Trembles en haut*.—An iron skeleton tower with a wooden top has been erected at this station to replace the building destroyed by fire, as mentioned in last year's report.

The tower is 63 feet high from base to vane ; the upper 23 feet being inclosed and painted white.

The building was erected by day labour under the supervision of Mr. E. Roy, the steel frame having been provided under contract by the Gould Shapley & Muir Co., of Brantford. The total cost of the new tower was \$909.

*Red Island Lightship*.—The boiler, machinery and fresh water tanks of this vessel were thoroughly repaired and overhauled this spring.

The only repairs to the boiler consisted of a little cleaning up, overhauling and touching up of the cocks and valves, which was attended to by the ship's engineer.



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The operating engine was found in good condition by Mr. Stevens, who made his annual inspection of this vessel in the fall of 1899, requiring nothing beyond the usual overhaul. The steam and water cylinders of donkey pump were badly cut and worn out, as well as the pistons. The cylinders were bored and pistons replaced by new ones. A new top was required for a 2in. globe valve; four feet of copper pipe from donkey pump to boiler renewed; steam bilge siphon overhauled and put in good condition; heaters in cabin repaired, leaks stopped and one coil renewed. The work in connection with the cylinders, pistons, copper pipe, siphon and steam coil was done in Mr. F. X. Drolet's workshop, in Quebec, and the other work attended to by the ship's engineer.

The twelve fresh water tanks were found leaking at the bottoms. They had been built in the vessel, and it would have been a very difficult and expensive job to take them out and put in new tanks; as it would have been necessary to remove a portion of the deck houses, deck beams and decks. It was not considered advisable under the circumstances to renew them at present. The bottoms of the six forward tanks, which were not so bad as the after ones, were covered with cement, and the sides touched up. The after tanks were bricked around for 15 to 18 inches in height, and the bottoms coated with cement to a depth of about 2 inches, with good fresh Portland cement. The bricks were laid in cement and cemented over. The tanks are now fit for service for some years to come.

A two-inch pipe was fitted from the water-ways on each side of the deck to the boiler feed-tank for the purpose of filling the tank with rain water. During a rain fall, the scuppers are plugged up, and the water runs into the tank, supplying sufficient fresh water to the boiler to avoid the use of sea water, which is injurious to boilers. Total cost of repairs: \$983.03.

*St. Thomas.*—The outer range has been changed to show as a fixed red light, not only in the line of range but on all other bearings on which it is visible.

The inner range light, visible over a small arc on each side of the line of range only, has been changed in colour from fixed white to fixed red, to distinguish it from the electric lights in the vicinity.

The lenses formerly used have been replaced in both lighthouses by catoptric illuminating apparatus.

*Saint Antoine.*—The upper light at this station, shown from an anchor light lantern, hoisted on a pole above the permanent light, to clear trees down stream, has been raised 10 feet by lengthening the pole, and is now 20 feet above the lower light and 116 feet above high water mark.

*Sainte Emélie.*—These range lights, built in 1880, but lit only on October 26, 1898, required urgent repairs to their foundations. This work was done by a mason sent from Quebec, and satisfactorily carried out. They were also painted by the keepers with local assistance, at a cost of \$6 each. Total expenditure \$68.05.

*Upper Traverse.*—The new pier stood the ice of its first winter in such away as to prove its success, as no settlement or derangement was found in it in the spring. It proved, however, the strength of the ice by the fact that the sides where not protected by iron, even above high water mark, were badly cut into. The whole of the noses and sides were covered this year, well above high water level, with steel plate, and no further damage from ice is anticipated.

The bottom in the neighbourhood of the pier, is being carefully watched, with a view to prevent the beginning of any scouring action, and as a precautionary measure, some stone was put in last season, about the pier.

A lighthouse tower, with keeper's dwelling attached, was built on the pier this year and a temporary fixed white catoptric light is now shown from a temporary wooden lantern on the tower. The light is elevated 47 feet above high water mark. It is intended to replace this temporary light next season by a permanent occulting light shown from a larger iron lantern.

The two pole lights previously used were discontinued when the light now shown from the lantern on the tower was established.

A bell, suspended 6 feet above the deck of the pier on a post rising above the north bulwark is rung by hand during thick weather.



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The lighthouse is a rectangular wooden building, painted white, with a red roof. The tower is square, rises above the roof from the north west corner of the building, and is painted white. The temporary wooden lantern, which surmounts it, is painted red. The height of the tower from the deck of the pier to the vane on the lantern is 42 feet, making the vane 56 feet above high water mark.

The work at this station was done by days' labour, under the supervision of Mr. E. Roy, foreman carpenter of the Quebec agency, and cost \$6,641.65 in addition to the sum mentioned in last year's report.

*White Island Reef Lightship.*—Considerable repairs were made to this vessel, during last winter. A new deck was laid by carpenters from agency shops, and the lumber imported from British Columbia. Part of the ship's railing was renewed, general spring overhauling and painting, as usual.

The boiler, machinery, &c., was inspected by Mr. Stevens, inspector of government steamers, in the fall of 1899. Nearly all the water tubes in the boiler had been removed and the boiler properly scaled and cleaned out. The lever safety valve required a new brass seat and valve. The donkey pump, and the steam and water pistons, being a little worn and leaky, were touched up and made tight. Three 2-in. globe valves renewed; one length of 1½-in. copper steam pipe also renewed; steam siphon overhauled and one length of the pipe renewed. A 2-in. pipe was laid from the water-ways on each side of deck to the feed water tank to catch the rain, as done in the case of Red Island Lightship.

The steam windlass and hawse pipes were completely overhauled and repaired.

Total expenditure, \$1,524,65.

## MINOR REPAIRS at Quebec Stations during year ended June 30, 1900.

Station.	Nature.	Cost.
Amherst Island.....	Assistance painting.....	\$ 12 00
Anticosti:—Heath Point	".....	25 00
South Point.....	".....	15 00
	Materials for wainscoting.....	54 25
	Landing repaired.....	18 75
	New boat.....	18 00
Ash and Bloody Islands.	Assistance painting.....	17 00
	New boat.....	40 00
Baie St. Paul.....	New floor.....	15 00
	New boat supplied from stores.....	
Bellechasse.....	Repairs to boats.....	8 00
Belleisle.....	Buildings painted and stone foundations repaired.....	199 00
Bicquette.....	Concrete floor of fog alarm renewed.....	
Brandy Pots.....	Chimney cap replaced.....	
	Winter canoe supplied.....	21 00
Cape Chatte.....	Assistance painting.....	13 65
	Telescope supplied.....	
Cape Despair.....	Assistance painting.....	12 00
	Sundry repairs and supplies.....	41 00
Cape Gaspé.....	Reglazing lantern.....	5 00
	Reshingling tower.....	23 00
Cape Madeleine, Upper Range.....	Assistance painting.....	15 00
Cape Madeleine, Lower Range.....	".....	13 00
Cape Magdalen.....	".....	15 00
Carleton Point.....	New boat.....	25 00
Contrecoeur back tower..	Lantern recovered.....	30 00
	Assistance painting.....	12 00
Chicoutimi Ranges.....	".....	39 15
Egg Island.....	Wood sheds.....	18 00
	Assistance painting.....	15 00
	Sundry repairs.....	22 00
Entry Island.....	Assistance painting.....	12 00
	Sundry repairs.....	22 30
Fame Point.....	".....	37 60



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MINORS REPAIRS at Quebec Stations—*Concluded.*

Stations.	Nature.	Cost.
Father Point. ....	Small repairs.....	\$ 9 00
Ile à la Pierre... ..	Assistance painting.....	7 00
Ile aux Prunes. ....	Iron plates repaired. ....	7 00
	New boat. ....	14 60
	Oil store.....	7 00
Ile aux Raisins.....	Assistance painting... ..	20 00
Isle de Grace.....	Repairs to pier . . . . .	72 00
Ile Ste. Thérèse. . . . .	Small repairs.....	
Kamouraska.....	Sundry repairs.....	53 00
	Assistance painting.....	7 00
Lake Memphremagog...	Boat for witch rock . . . . .	15 00
	Riprap at Leadmine.....	8 00
	Repairs to boat Molson's rd.....	7 00
	Sundry repairs.....	24 25
Lake Islet.....	Boat.....	19 00
Lavaltrie.....	Repairs to piers.....	50 00
	Shelter shed repaired.....	10 00
Martin River. ....	New camps provided.....	
Newport.....	New boat.....	16 00
Percé... ..	Repairs to lantern.....	10 00
Pilgrims.....	Repairs.....	55 00
	New flag pole.....	40 00
Pillars. ....	New sails for large boat.....	
	New canoe and repairs.....	101 92
Plateau.....	Wanscotting.....	10 00
	Assistance painting.....	15 00
Platon.....	".....	8 00
Pointe aux Citrouilles...	".....	8 00
Portneuf (En Haut).....	Repairs to foundations.....	10 00
Port St. François.....	Repairs to piers.....	109 75
	New roof, &c., to front tower . . . . .	27 00
St. Valentin.....	Top of lantern renewed.....	25 00
Sorel.....	Painted by P. W. D.....	51 87

CHANGES IN BUOYS AND BEACONS.

*Gulf Beacons.*—Commander Wakeham, of the Fisheries Protection Service, having reported that the top marks on the beacons on Whale island, entrance to Bonne Espérance harbour, and on Flat island, off Great Meccatina island, on the north shore of the gulf, were bent over, it was decided to remove these top marks, and each of the beacons will hereafter consist of a steel framed tripod, 30 feet high, with slatted sides, painted white.

The beacon on outer island, entrance to Coacoacho bay, on the same coast, has been destroyed and will require to be rebuilt.

*Barrett Ledge Gas Buoy.*—On the opening of navigation in 1900 the cylindrical buoy was replaced by a pillar buoy with a bell.

*Vache patch.*—At the same time the red and black banded can buoy marking this shoal, in the entrance to the Saguenay, was replaced by a red conical steel buoy.

*Marmen Rock.*—About June 10 last, the can buoy marking this danger was changed in colour from black to red and black in alternate horizontal bands, to indicate that the rock is a middle ground.

*Demers Rock.*—At the same time the red can buoy was changed in colour, and made a middle ground buoy for the same reason.

*Pilgrim Shoal Gas Buoy.*—On the opening of navigation in 1900 the spherical buoy was replaced by a pillar buoy with a bell.

*Can Buoy 23 Q.*—The black can buoy, No. 23, Q., marking the north edge of the middle ground below Pointe aux Trembles gas buoy, was last season moved about 670 feet S. 73° E. from its former position, at the suggestion of the pilots.



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In its new position it is about 250 feet north of a spot with only 19 feet water on it. There is a shoulder with  $27\frac{1}{2}$  feet water on it where the buoy was previously moored, and deep draught vessels should give the buoy a berth of at least a cable.

*Trembles Shoal Gas Buoy.*—The pillar buoy with a bell was on the opening of navigation in 1900, replaced by a spherical buoy without a bell. Pilots complained frequently of the light shown from this buoy, although the lantern was exactly the same as on the buoy displaced. It is probable that the smaller buoy did not ride as steadily as the large bell buoy, and that consequently the full effect of the light was lost.

*Ste. Croix Gas Buoy.*—On the opening of navigation in 1900 the pillar buoy with a bell was replaced by a cylindrical buoy without a bell. About October 1 this buoy was moved 650 feet S. E. by S.  $\frac{3}{8}$  S. from its former position, to mark the north edge of the dredged cut at its lower end, as completed by the Department of Public Works.

*Three Rivers.*—To mark the edge of the ship channel, as widened this year by the Public Works Department, the following changes were made in the buoyage:—black spar buoy, No. 55 C, was moved 350 feet S.  $52^{\circ} 22'$  E. to mark the south edge of the channel at the north edge of the most easterly of three shoals partially removed below Three Rivers.

A new black spar buoy, to be known as No. 57 C, was placed 3,580 feet S.  $69^{\circ} 45'$  W. from the new position of buoy No. 55 C, to mark the south edge of the channel at the north edge of the middle shoal. This buoy also indicates the width of 1,200 feet for steamships turning at Three Rivers, and has been greatly appreciated by pilots.

Black spar buoy No. 57 C, now known as buoy No. 59 C, was moved 290 feet S.  $30^{\circ}$  E. from its old position to mark the south edge of the channel at the north edge of Three Rivers shoal, the most westwardly of the three shoals above mentioned.

## NOVA SCOTIA LIGHTHOUSE DIVISION.

This division, in charge of Mr. J. Parsons, agent of the department in this province comprises 191 lighthouses, exhibiting 203 lights, 1 light vessel, 16 steam fog-alarms 1 explosive fog-alarm station, 30 hand fog-horn stations, 2 fog-bells, 21 automatic whistling buoys, 17 automatic bell buoys, 119 iron or steel buoys, about 800 spar and other small buoys, 9 stationary beacons, 16 life-saving stations, 3 humane establishments, 4 signal stations and 1 steamship, the *Newfield*.

The stations have been inspected by Mr. C. A. Hutchins, superintendent of lights, the boilers and machinery at the fog-alarm stations by Mr. D. Stevens, inspector of government steamboats, and the life saving stations by Capt. B. Douglas, R.N.R., naval assistant.

All the automatic buoys (bell and whistling) have been placed and cared for by the *Newfield* aided during part of the winter by the Dominion Government Steamer *Lansdowne* and later by the *Stanley*. About 50 of the spar buoys and 75 iron cans are placed and replaced directly by us; the others in the different harbours are cared for and kept in position by persons holding three year contracts obtained by public competition.

## NEW AIDS TO NAVIGATION.

*Coal Wharfs Range Lights in Louisbourg Harbour.*—Two fixed red electriclights have been established by the Dominion Coal Company, limited, in the northern portion of the harbour to lead to the company's coal wharfs from the intersection of their alignment with the alignment of the government range lights on the east shore of the harbour.

The front light is shown from a lamp on a white pole standing on the outer end of the more easterly of the two long coal wharves. It is elevated 43 feet above high water mark.

The back light is shown from a lamp on a white pole erected on the north side of the railway track, 2,060 feet N.  $33^{\circ} 45'$  E. from the front light. It is elevated 85 feet above high water mark.



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*Little Loran light.*

A lighthouse, erected on the extremity of the western headland (locally known as Black head) at the entrance to the harbour of Little Loran, on the eastern coast of Cape Breton island, was put in operation on May 1, 1900.

The building is an octagonal tower with sloping sides, painted white, surmounted by an octagonal iron lantern, painted red. The tower is 32 feet high from its base to the vane on the lantern, and stands 50 feet back from the extremity of the head, on ground 50 feet above high water mark.

The light is a fixed white light, elevated 76 feet above high water mark. The illuminating apparatus is dioptric, of the 7th order.

This light was established for the convenience of local fishermen, and will be maintained only from May 1, to December 1, of each year.

The building was erected under contract by Mr. Jas. Dowd, of Louisbourg, whose contract price was \$300. The total cost of establishing this new light was \$878.66.

*Inner Sambro Island Pole Light.*

A pole light, established on the western extremity of Inner Sambro island, in the county of Halifax, was put in operation on January 3, 1900.

The light is shown from a lens lantern hoisted on a mast 17 feet high, painted white, which stands on ground 30 feet high above high water mark and 100 feet back from the water's edge.

The light is fixed white, elevated 45 feet above high water mark, and should be visible 8 miles from all points of approach. This light is intended principally for the guidance of fishermen of Sambro and adjacent harbours, and will be maintained only from December 1, to April 30, in each year.

This work was done under the superintendence of the officers of the department at Halifax, at a cost of \$527.61.

*Woods Harbour Lighthouse.*

A lighthouse erected on Big ledge in Woods harbour, Cockerwit passage, in the county of Shelburne, was put in operation on September 1, 1900.

The light is a fixed red light elevated 27 feet above high water mark, and should be visible 8 miles all around the horizon. The illuminating apparatus is dioptric of the seventh order.

The lighthouse is a square wooden building with sloping sides, painted white, surmounted by an octagonal iron lantern painted red, and stands upon a concrete pier built on the highest part of the ledge, which is covered at high water. The height of the tower from the pier to the vane on the lantern is 28 feet.

A hand fog horn, established at the light station, is sounded in answer to signals from vessels.

This light was built by days' labour, under the supervision of Mr. Amos McLellan, and cost \$1,478.10. It has been found necessary to protect the foundation from the sea by a breakwater, which will also answer as a boat harbour. The work will be done during the coming season.

*Margaree Harbour Lights.*

Two new range light buildings were established on the mainland opposite the entrance to the channel leading into the harbour, to replace the light heretofore shown from a small tower on the breakwater. They consist of two small square wooden towers with sloping sides.

Materials were sent from Halifax and the work done by local workmen under the supervision of foreman McLellan of this department.

The lights have not yet been put in operation.



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*Hand fog horns at light stations.*

During the past season hand fog horns were established at the following light stations in this agency, which are used whenever the fog signals of vessels are heard :—

Fort Point, Lahave ;  
Isaac harbour ;  
Crow harbour, (Queensport).

## PRINCIPAL REPAIRS AT EXISTING STATIONS.

*Battery Point.*—Roof of kitchen reboarded and shingled. Door fitted to entrance of dwelling and nine storm sashes fitted.

*Country Harbour.*—A new brick tank was built in cellar and a new door was fitted to porch. Two rooms were sheathed and the buildings painted.

*Cranberry Island.*—A brick filter was built in cistern and the front door steps renewed. The chimney flue was repaired and also the boat. Binocular glass supplied and fog-alarm buildings, oil store and boat-house painted.

*Cape La Ronde.*—Purchased store at landing and had it repaired for temporary storage of supplies and empties to be returned. The buildings were painted.

*Cheticamp.*—Floor of dwelling repaired, kitchen flue repaired, buildings painted and new copper ventilator fitted to lantern.

*Chebucto Head.*—A new lantern replacing the old wooden lantern was erected. Half of foundation walls under lighthouse taken down and rebuilt with concrete. New front porch built, roof of light-house and other parts overhauled and repaired. New sills and joints in oil store. Work done under supervision of Foreman McLellan employing local labour.

*Coffin Island.*—New store built at landing for temporary storage of supplies, buildings painted.

*Cape Fourchu.*—Repairs were made to dwelling house by Mr. A. Cook, as follows : Portion of west sills renewed, wall shingled, new foundation, masonry wall under entire length, foundation wall under porch pointed, new sashes and frames in cellar, front wall resingled, six new sashes and frames fitted, new corner board, porch, new steps, new sills, new door and frame and walls and roof resingled, new cornice and gutters and six lower courses of shingles renewed, new sill east side, sixteen feet foundation wall relaid.

*Cape Race.*—Roof of engineer's dwelling partly resingled and store room sheathed with G. and T. lining. Tramway at coal shed at landing replanked.

*Devil's Island.*—Reset all panes in both lanterns (21) with rubber instead of putty. Lantern of west tower had six panes and thirty brass studs broken. Lantern of east tower had seven panes and twenty-five studs broken.

East tower : spliced four deck beams, renewed one third deck planking and canvas covering, renewed steps and hand rails to entrance of porch.

West tower : spliced four deck beams, renewed half of deck planking, canvas on deck and repaired steps. All new work painted two coats. New boat slip 72 feet long built and new door fitted to oil store.

*Egg Island.*—Removed stones from boat landing, repaired breakwater, resingled east side of boathouse, repaired oil store walls and boat-slip.

Repairs to dwelling house, south side of roof resingled, new floor laid in kitchen, sills, floor and door casings of porch renewed. W.C. removed from dwelling house and built outside.

*Fort Point.*—Roof of lantern reboarded and shingled, chimney taken down and rebuilt. Plank drain laid from kitchen sink.

*Jeddore.*—Fitted partition at stair head, new beams on landing stage, boathouse and wharf raised and new supporting posts fitted, resingled roof of boathouse, new floor laid in store, and buildings painted.

*Liscomb.*—Two rooms sheathed with G. & T. lining and chimney repaired, new copper ventilator fitted to lantern.



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*Louisburg.*—New window sashes fitted, binocular glass supplied, repaired rail around lantern deck, roof and sides of barn patched, buildings painted.

*Petit de Grat.*—North-west side of boat-slip faced with logs to protect from ice, top covered with plank, storm door fitted, brick tank built in cellar.

*Port Hood.*—An addition built to keeper's dwelling, 25 feet long by 14 feet wide, new chimney built, new floor laid in kitchen.

## FOG-ALARMS.

*Brier Island.*—Crosby automatic whistle valve repaired. Two leaky water space screw stays in boiler bored out and replaced by larger stays. Leaky seam in bottom of boiler shell chipped and caulked.

*Cape Fourchu.*—A new chimney was built and the smoke boxes were altered and lengthened to enter chimney, leg of left-hand boiler was patched, a new set of grate bars supplied and some pipes and fittings renewed.

*Cape Roseway.*—A new reed box was fitted and six new reeds supplied, two patches placed on bottom of furnace, steam chest jointed, air cylinder of fog-trumpet overhauled, a new boiler fitted up with new connections, some fittings on boiler renewed.

*Cape d'Or.*—Globe valves and nipples renewed.

*Cape Sable.*—Two large patches put on furnace, leaky seams caulked inside furnace and outside of shell, eleven joints about boiler renewed.

*Chebucto Head.*—Crosby automatic machine repaired, one new 10-inch whistle supplied, old whistle sent to Halifax to be repaired, several small leaks in boiler caulked.

*Cranberry Head.*—Six new trumpet reeds supplied, a few leaky joints renewed.

*Cross Island.*—Old boiler stripped and removed, new boiler and fittings put up, steam pump overhauled and other machinery put in good working condition.

*Cape Race.*—Two 10-inch whistles repaired, a small patch fitted on the leg of each boiler, and the donkey hoisting winch repaired.

*Meagher's Beach.*—Trumpet repaired and set of reeds supplied, new globe valve fitted on donkey steam pipe, water gauge glasses supplied.

*Point Prim.*—New fittings connecting boiler to winch.

*Scatarie.*—Two new bells fitted to fog-whistle, one new Crosby automatic whistle, valve and metropolitan injector fitted, 15 feet of suction pipe and check valve to boiler renewed.

*St. Paul's Island.*—New Crosby automatic whistle machine set up and the old one sent to Halifax for repairs, new fresh water tank built, set of taps and dies and pipe-cutters supplied, some pipe fittings renewed on the old boiler, water gauge glasses supplied.



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## MINOR REPAIRS AT NOVA SCOTIA LIGHT STATIONS, 1900.

Station.	Nature of Repairs.
Arichat .....	Buildings painted.
Argyle .....	Dwelling reshingled, winch repaired and glass put in lantern.
Beaver island .....	New boat, boat slip built and building painted.
Beaver island pole .....	Shed and mast painted.
Bon portage .....	Porch reshingled.
Bunker island .....	Inside of pier painted, boat, dory and water barrels repaired and chimney rebuilt.
Brier island .....	Wire guys to lighthouse repaired.
Burntcoat .....	Buildings painted.
Canso harbour .....	Four new lamps and new boat supplied, buildings painted.
Crichtons head .....	Breakwater repaired, cellar door repaired and buildings painted.
Cape St. Lawrence .....	Cleared away stones from landing slip.
Caveau point ranges .....	Lots inclosed by picket fences.
Cariboo .....	Outside storm door fitted.
Carters island .....	Landing slip repaired and buildings painted.
Cape Roseway .....	New dory supplied.
Candlebox .....	Material landed for breakwater to be built next summer.
Cape Sharp .....	Boat tramway and road leading to lighthouse repaired.
Georges island .....	Fog bell repaired and reflectors resilvered.
Gull rock .....	New boat, boat slip repaired and east side of tower reshingled.
Horton bluff .....	Ladder supplied and new locks fitted to doors.
Ingonish island .....	Materials landed to repair lantern and buildings painted.
Louisburg range .....	Laid plank walk between lights.
Low point .....	New door and sill, and roof of coal shed reshingled.
Little Narrows .....	Renewed posts under sill of lighthouse.
La Have .....	Porch reshingled and front steps renewed.
Little Hope .....	Landing slip repaired.
Main à Dieu .....	Landed materials for repairs to foundation to be made next spring.
Margaree harbour .....	New capstan fitted in boathouse, buildings painted, reflectors replated.
Medway head .....	Two new panes lantern glass refitted.
Pope harbour .....	Boathouse reshingled and buildings painted.
Point Tupper .....	Chimney and foundation repaired.
Pugwash .....	A water closet built clear of buildings.
Port Mouton .....	Buildings painted.
Port Hebert .....	Buildings painted.
Peases island .....	Part of roof reshingled and buildings painted.
Sand point .....	All lantern glass reset and cracked panes renewed.
Scattarie .....	Repairs made to fencing.
Sydney harbour .....	New lamp supplied.
St. Anns .....	Buildings painted.
Sambro .....	Repairs made to foundation wall of rocket building.
Sand Spit .....	Buildings painted.
Seal island .....	Tower and dwelling painted.
Stoddard island .....	Building painted.
Wolf point .....	Boathouse built at inner landing, and buildings painted.
Wedge island .....	Boat winch supplied and new floor laid in oil store.
Whitehead .....	Buildings painted.

## BUOY SERVICE.

*Lunenburg Automatic.*—This buoy sank at its moorings about February 23 last, and a new buoy was placed on April 27.

*Rock Head Iron Can Buoy with cage.*—In February last this buoy was driven ashore on Thrumcap and was recovered without the moorings.

*Yarmouth Fairway Automatic.*—Was picked up two miles out of position on October 30 1899, and replaced.

*S. W. Breaker Sambro Can Buoy.*—This buoy was picked up by S. S. *Anita* and brought in with 23 fathoms of chains and mooring stone missing.

*Pollock Shoal Conical Buoy.*—Went adrift and was picked up without the mooring stone.

*Black Point*—This spar buoy, 45 feet long, disappeared on April 23 last and was not recovered.



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*The Sisters, Bell Buoy.*—The *Lansdowne* recovered this buoy adrift 20 miles S. E. from Sambro, with loss of all moorings excepting 10 fathoms chain.

*Pennant Point, Automatic.*—This buoy was picked up adrift on May 10 last by the tug *A. G. Whitney*, and brought in with part of the moorings lost.

*St. Johns Ledge.*—The bell buoy heretofore maintained off St. Johns ledge, on the south-west coast will be discontinued and a conical steel buoy, painted red, has been moored in 9 fathoms water,  $\frac{1}{2}$  mile W. S. W. from the middle of the ledge.

*Louisbourg.*—To accommodate the colliers visiting the harbour, the red conical buoy maintained on the extremity of the shoal extending out from Nag rock, known as 'the turning buoy,' will not, hereafter, be maintained, having been rendered unnecessary by the establishment of the Coal wharves range lights. Pilots, however, claim that this buoy should be retained.

The six spar buoys in the harbour are hereafter to be maintained throughout the year.

The bell and whistling buoys, outside the harbour, will, as heretofore, be removed for the winter. If possible, their positions will be marked by winter spar buoys, but mariners must not depend on finding buoys in position in winter in stations so exposed.

*Little Hope Shoal.*—A whistling buoy on the Courtenay principle was moored on August 28, in 14 fathoms water  $\frac{1}{2}$  mile south (true) from the middle of this shoal, in Queens county. The buoy is a red conical buoy with 'Little Hope Shoal' marked in white letters on the side, and is surmounted by a ten-inch whistle.

*Peters Island Reef.*—An iron spindle to mark the end of the reef extending north-east-ward from Peters island, Grand passage, Digby county, was erected August 24, 1900. The spindle is 33 feet from base to top and consists of an iron upright, surmounted by a spherical iron cage, the whole painted black. It is set 684 feet from high water mark. This spindle was erected by the crew of the D.G.S. *Lansdowne*, and cost \$30.

*Gull Ledge.*—The red steel can buoy, heretofore maintained on Gull ledge, Yarmouth county, was on September 8, 1900, replaced by a red conical buoy, in accordance with regulations for shapes of buoys adopted by the International conference.

*Black Rock.*—The spar buoy heretofore maintained on the north extremity of the shoal has been replaced by an iron can buoy painted black.

*Canso Harbour Fairway.*—The iron can buoy established in 1898, off the northern entrance to Canso harbour, to guide vessels into the harbour through the northern entrance between outlying shoals has been replaced by a bell buoy.

The buoy is moored in 13 fathoms water,  $1\frac{1}{16}$  miles N.  $\frac{1}{2}$  E. from Hart island light, is painted in alternate black and white vertical stripes, and is surmounted by a bell rung by the motion of the buoy on the waves.

*Beaver Harbour.*—A bell buoy was established in July last, off Beaver harbour, on the southern coast of Nova Scotia.

The buoy is painted in black and white vertical stripes, surmounted by a bell rung by the motion of the buoy on the waves, and moored in 30 fathoms water in the fairway to the harbour.

*Fourché.*—The bell buoy, heretofore maintained at the entrance to Fourché inlet, south coast of Cape Breton, was, on July 3, 1900, moored in a new position in  $12\frac{1}{2}$  fathoms,  $\frac{1}{2}$  mile south from the extremity of Fourché head, at the request of local fishermen.

*Marie-Joseph.*—The entrances to this harbour in the county of Guysborough, have been marked by spar buoys, as follows :—

Red buoy on south-western extremity of spit off Frenchman rock, and red buoy off western extremity of Siteman rock, in the western entrance, and black buoy on northern extremity of Pan shoal, black buoy on eastern extremity of Turner shoal, and red buoy on southern extremity of Middle ground; all in the eastern entrance.

*Lurcher Shoal.*—The whistling buoy, marking the position of the shoal, was reported missing from its station, at the end of February, 1900, and was replaced by a new buoy on March 22.

*North-west Ledge.*—The bell buoy moored off this ledge was reported last winter to have disappeared from its station, and the report was advertised, but it was found later that the information was erroneous.



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## NEW BRUNSWICK LIGHTHOUSE DIVISION.

The New Brunswick division comprises all the lighthouses and other aids to navigation within the boundaries of the province, both on the Bay of Fundy and on the Gulf of St. Lawrence coast. The large buoys maintained by the Government on the Nova Scotia coast of the Bay of Fundy are attended to by the steamer *Lansdowne*, under the direction of the New Brunswick agent, but are otherwise under the control of the Nova Scotia agent.

This division is under the charge of Mr. F. J. Harding, agent of the department at St. John, N. B.

The lights, &c., were inspected by Mr. John Kelly, inspector of lights.

There are in this agency 123 lighthouses, 2 light-ships and 12 steam fog-alarms.

The number of keepers and engineers in connection with the lighthouses and fog-alarms, is as follows: 88 light-keepers, 7 light-keepers and engineers of fog-alarms, 12 engineers and 6 assistant engineers—112 in all.

The method of supplying the lights varied in accordance with locations. The supplies for the St. John river, Grand lake and Washademoak lake lights were shipped by regular local steamers and a separate bill of lading furnished for each station.

The supplies for the Miramichi river lights were sent by the bay lightship and by regular lines of steamers or schooners trading to the different points.

The Bay of Fundy lights were supplied by the steamer *Lansdowne*, and those in the Baie des Chaleurs district were supplied by rail. In all cases the supplies have been delivered in the most convenient and economical way.

## NEW AIDS TO NAVIGATION.

*Greys Point Light*.—A mast light, at Greys point, at the head of Belleisle bay, in Kings county, was put in operation on May 30, 1900.

The mast is 36 feet high, and has a shed at its base. Both mast and shed are painted white. It stands on a crib work pier built on the shore line, 335 feet south from the N. W. corner of the government wharf.

The light is a fixed white light, shown from a lens lantern hoisted 46 feet above the ordinary summer level of the bay.

The light is exactly in the alignment of the Hatfield point range lights, on the north or opposite shore of the bay, about 2,400 feet distant, and answers as a leading light through the dredged channel S.S.W., from Hatfield point wharf.

The work was done by Mr. Kelly, inspector of lights, under the direction of the agent, and cost \$25.50.

*Hampstead Wharf Light*. A mast light was put in operation on October 29, 1900, on the public wharf of the parish of Hampstead, Queens county, west side of the river St. John.

The light is shown from a lens lantern, hoisted on a mast 31 feet high, with a shed at base, the whole painted white and standing on the wharf near its outer end.

The light is fixed white, elevated 36 feet above high water mark. It is intended to guide river traffic to the public wharf.

This work was done under the immediate supervision of the agent, at a cost of \$35.43.

*Hand Fog Horns at Lightstations.*

During the past season hand fog horns were established at the following lightstations in this Agency, which will be used whenever the fog signals of vessels in the vicinity of the stations are heard:

Southwest head, Grand Manan,	Dipper harbour, Bay of Fundy.
Grand harbour, “	Musquash, “
Swallow Tail, “	Cape Spencer, “



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South-west Wolf island, Bay of Fundy.	Quaco pier, Bay of Fundy.
Fundy.	Andersons hollow, "
St. Andrews sand reef; Passamaquoddy bay.	Fort Folly point, "
Bliss island, Bay of Fundy.	Green head; River St. John.
Pea point, "	Cassie point; Northumberland strait.
Drews head, "	Portage island mouth of Miramichi river.
	Big Shippegan; Gulf of St. Lawrence.
	Pokesudie; Chaleur bay.

## IMPROVEMENTS, REPAIRS, &amp;c., AT EXISTING STATIONS.

*Anderson Hollow.*—During the storm of December last the shingles were torn off the eastern and southern sides of this lighthouse. Instead of reshingling, the ends were sheathed up with matched boards and two (2) 8 inch knees, 8 feet in length with an arm of three feet, were firmly placed and bolted to the tower as well as to the timbers of the wharf.

*Beaver Harbour.*—A new abutment, 60 feet in length, 15 feet high and 12 feet wide was erected around this light station, the old one having become completely decayed. A railing and new planking were placed on top at a cost of \$227.35.

The lantern door, also the trap door were repaired. The lantern was painted outside, as well as in, this year.

*Bliss Island.*—The lighthouse has been painted inside and out, this year.

The eastern side of the roof of the keeper's dwelling was reshingled, also the ell.

The ceiling of the sitting-room was sheathed and a wainscoting 30 inches in height placed around the room. The ceiling of hall on the second floor was also sheathed. Two rooms were papered and the dwelling painted inside and out. Three (3) outside sashes were also furnished.

*Big Duck Island.*—The water tank or reservoir at this fog alarm station was thoroughly repaired, the inside of same being rebuilt with new brick and cement.

The old boiler had new tubes placed in it by Mr. Coleston.

A new 15 foot boat was furnished for the keeper's use at a cost of \$45.

*Campbellton.*—The back range lighthouse, on Mr. Kilgour Shives' wharf, has been raised 15 feet higher than it was previously, by building under it a crib work block. The work was done by Mr. Shives, under an agreement made with the chief engineer of this department

*Cape Enrage.*—The clapboards on the eastern side of the lighthouse tower were found to be decayed, also the sheathing on the posts, all were removed and renewed, and the building painted from dome to sills.

Two (2) new panes of glass were placed in the lantern. A new flag-pole was erected.

The keeper's dwelling was painted outside, and two rooms papered. The out-buildings were whitewashed.

A new spare boiler has been furnished this station. The repairs are now going on and will appear in next year's report.

*Flewelling Landing.*—The intensity of the light shown from the mast on the wharf here has been increased by substituting a lantern with a dioptric lens of the 7th order, and a large lamp, for the pressed lens lantern formerly in use. The light remains fixed red as heretofore. It is elevated 25 feet above high water mark. The mast is 19 feet high.

*Gannet Rock.*—Extensive repairs have been made at this station during the past season, as follows:

The sea wall has been thoroughly overhauled and largely rebuilt, and a new tramway, 65 feet long, connecting the high water landing with the lighthouse has been built. Three additional guys have been placed from the lighthouse to the rock and various minor repairs have been made. The total cost was \$314.

*Grindstone Island.*—A new spare boiler and a donkey feed pump were supplied this year. The pump is connected with both boilers. Where any pipes were found



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defective, they were removed and new ones supplied. New brass unions were put in the main steam pipes, new valves and check valves to feed pipes.

The legs of old boiler were found to be leaking badly and the defective places in water space of legs were patched and Portland cement was mixed thin and poured into the water space four (4) inches above lower plug holes ; new plug holes were put in, in order to clean and examine the interior of boiler. The opening at water line was covered securely with plates.

The foundation under the trumpet was rebuilt with stone and cement. All the old timber was removed and the floor of engine house was cemented.

*Harper Point.*—The mast has been increased 10 feet in height and is now 35 feet high ; and on June 18, the intensity of the light was increased by substituting a lantern with a dioptric lens of the 7th order for that with a pressed glass lens formerly in use.

The light remains fixed white, as formerly, and is elevated 48 feet above high water mark.

*Hatfield Point Range* :—These lights were rearranged, to increase their efficiency.

The front light is shown from a lantern hoisted on a mast, standing on a crib-work block built in the angle of the ell (L) at the outer end of Hatfield point public wharf. The mast is 40 feet high. The fixed white light is elevated 41 feet above high water mark.

The back light is shown from a lantern hoisted on a mast, standing near Mr. Israel Noble's dwelling house, and is distant 160 feet N.N.E. from the front light. The mast is 38 feet high. The fixed red light is elevated 36 feet above high water mark.

The lights are visible between the bearings of N. E. through N. to S. W. In one they show the middle of the dredged channel S.S.W., and lead to Gray's wharf on the south side of the bay. The sides of the channel are balized, and a black can buoy is moored at the south end of the dredged cut.

*Letete.*—During the year a new boiler has been set up at this fog-alarm station and new pipes and fittings placed where required. The old boiler was an upright one, and the new one is a locomotive boiler.

Owing to the small dimensions of the building it was found necessary to move the boilers around in order to place the new one in position, also to remove a chimney and break an opening in the building on the western side to get the new boiler in.

A new window frame and sash was placed in the end of the building opposite the boiler to allow cleaning the tubes.

New tubes were put in the old boiler. A new donkey pump was furnished this year at a cost of \$120. The roof of keeper's dwelling was shingled.

*Machias seal Island.*—The eastern light tower lantern was partially reglazed.

The old lamp with three duplex burners was removed and replaced with a new Miller lamp, which, is giving good satisfaction. The large boiler had a brass  $\frac{5}{8}$  inch plug put in the tube sheet, the old tubes were taken out and a new set put in. Mr. W. J. Coleston made the repairs at a cost of \$93.50 for labour and expenses.

The reservoir 20 x 40 was replanked with three inch deals, and new posts placed under the centre sill.

The iron tramway was repaired where large drift timber had got caught under the rail, breaking same and bending the braces.

The reservoir and tramway repairs were made by Mr. M. F. Ritchie at a cost of \$265.87 for labour on tramway and \$43.90 on reservoir.

*Miramichi Bay Lightship.*—The schooner *Frederick Gerring*, used for this service was before the opening of navigation caulked where required and the bottom painted with copper paint. The usual spring painting was done.

On October 11, she was blown from her station by a heavy gale and stranded on Bay du Vin island, whence she was floated under the supervision of Mr. John Kelly, at a cost of \$591.69, in November. She was not replaced on her station up to the close of navigation.

*Partridge Island.*—The tower on the fog-whistle building was lowered about eight feet.



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A new boiler, which cost \$895, was installed here, and new pipes and fittings were necessary to connect it.

The steam whistle which leads out through the top of the building has been lowered, and appears to give better results.

A new brick chimney, 45 feet in height, was erected instead of the low chimney and smoke-stack which was formerly here. The new chimney gives a fine draught and excellent satisfaction. The cost of labour on chimney was \$163.10.

Repairs have been made to the road leading to the alarm building, and the top of the wharf leading to the road has been raised about three feet, thus making the grade longer and easier.

*Richibucto.*—The entrance to this harbour in the vicinity of the lights was examined by Mr. J. F. Fraser, on request of interested parties, and it is the intention of the department to establish two new ranges on the opening of navigation in 1901. The present back light will at the same time be discontinued.

*St. John Harbour.*—A few small repairs were made to the block of the Beacon light, during the past year, viz.:—Some of the timbers have been respiked, some new plank in the eastern side and ten (10) new steps built. The iron hand rail was also repaired. A new winch was furnished for the derrick.

The three duplex burner lamp formerly in use at this station has been replaced by a new Miller lamp.

The building has been painted inside and out, and the abutment whitewashed.

Repairs are now being made to the western side of the block.

The fog bell broke in November, 1900, and for the few days during which a new bell was being cast, it was necessary to discontinue the operation of the fog-alarm.

*South-west Head, Grand Manan.*—The road leading to the lighthouse has had repairs costing \$100, the provincial government paying one half this amount and this department the balance.

*Swallow Tail.*—A brick chimney on the outside of the kitchen was removed and a new one erected inside. The roof of dwelling-house was reshingled.

The cellar wall and floor had some new brick put in it and cemented.

By a storm early last spring, the derrick platform was very much damaged, three iron standards were destroyed and all the planking carried away, also the lower part of tramway. The material for repairs was sent to the station, and the keeper made all the repairs himself.

The duplex burner formerly used at this station has been removed, and a Miller lamp substituted therefor.

*Zephyr Rock Lightship.*—The lightship maintained last autumn to mark Zephyr rock, in Shediac harbour, principally to facilitate the passage of the mail steamers running to Prince Edward Island, was again placed in position October 1, 1900. She was blown off her station by the gale of October 11, but was again replaced and maintained until the close of navigation.



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## MINOR REPAIRS in New Brunswick, 1900.

Station.	Work.	Cost.
Bridges point .....	New boat.....	10 00
Cape Spencer .....	Revolving machine repaired.....	
	New reflector furnished.....	
Cassie point.....	Foundation repaired....	
	Oil shed removed from edge of rock and shingled.....	
Cox Point.....	Ice breaker repaired.....	
Escuminac.....	8 new tubes in boiler.....	
Musquash.....	New derrick erected....	
Gagetown. ....	Riprap provided.....	5 00
Goose lake.....	Repairs to tower.....	
	Brush protection.....	92 00
	New boat.....	20 00
Grand Manan, N. head..	Repairs to water tanks.....	38 00
Head harbour.....	Lantern partly reglazed.....	
	Boat house repaired by crew of <i>Lansdowne</i> .....	
	Breakwater being rebuilt.....	
	New water pipe to engine.....	109 70
	New donkey pump supplied.....	
Hendry point.....	Door repaired.....	
Hay Island.....	New slip provided.....	
Musquash Island.....	New boat.....	35 00
Negro point.....	Repairs to piers.....	16 65
	Repairs to breakwater.....	260 00
Neguac.....	Brush laid and small repairs.....	27 37
Oak Point.....	New site purchased.....	150 00
Portage island.....	Dwelling resingled.....	
	New floor laid in kitchen.....	
Lepreaux.....	Blacksmith shop built.....	28 17
Pea point.....	Sundry small repairs.....	
Passamaquoddy bay....	Pier deck renewed.....	
	Boat repaired.....	
	Chimney ventilator provided.....	
Point Brulé.....	Sand bank in front cut down 4 feet.....	
Quaco west head.....	New derrick erected and repaired.....	70 65
	New stone reservoir.....	235 00
Shippegan.....	Small porch built.....	
Tracadie.....	Brush protection.....	57 00

## BUOY SERVICE.

The buoys under contract in the various districts have been well maintained, fewer complaints being made than in former years.

The coast buoys of the New Brunswick district, and of that part of Nova Scotia that lies in the Bay of Fundy, were attended to by the D. G. S. *Lansdowne*.

*St. John Harbour Bell Boat*.—Some small repairs were made by Mr. James O'Donnell at a cost of \$29.02.

The gong strikers were repaired by Mr. W. J. Coleston. The total cost of repairs, boating to and from and pumping out water, during the year, was \$62.77.

The agent reports this bell boat completely worn out.

*Quaco*.—When the bell buoy, marking the end of the reef running out from Quaco head, was placed this spring, its position was changed so as to better mark the extremity of the reef. It is now moored in 10 fathoms water, 100 yards outside the line of 4 fathoms at low water, at the south-east extremity of the reef. The buoy will, in future, be maintained on this spot instead of in the old position.

The buoy on Quaco shoal was also changed in shape from can to conical, to make it conform to the International rules for buoyage.

*Grindstone Island*.—The red iron can buoy heretofore maintained on the tail of Grindstone island reef, has been replaced by a conical buoy, to conform to the regulations for shapes of buoys adopted by the International conference.



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The new buoy is painted red, with Grindstone island in white letters on it and is moored in 5 fathoms water,  $\frac{1}{2}$  mile W.S.W from the lighthouse.

*Miramichi River.*—Five of the wooden can buoys heretofore maintained were replaced by 5 iron can buoys, on the opening of navigation last year.

*Two Rivers Harbour.*—Two beacons, consisting of masts bolted to rocks on the sides of the channel, surmounted by triangular slatwork tops, have been established at the entrance to Two Rivers harbour, New Horton, on the north shore of Chignecto channel, Bay of Fundy.

One of the beacons stands on the starboard side of the channel, on a rock elevated 13 feet above low water mark. The mast is 26 feet 6 inches high, painted red.

The other beacon is on the port side of the channel, distant 90 feet northwardly from the starboard one. The mast is 22 feet high, and stands on a rock 20 feet above low water mark.

Two Rivers is a high-tide harbour, and is dry at low water. There is a narrow channel, leading from the deep water of Chignecto channel to the government wharf at the head of the harbour, which follows the west shore at a distance of about 100 feet therefrom. The bottom of this channel is about 7 feet above low water mark.

The beacons were erected under the supervision of Mr. J. Kelly, at a cost of \$41.98.

The following work was done on Important Buoys in this Agency :—

Name.	Nature of Work.	Cost.
		\$ cts.
Black point whistling. . .	Placed January 11, 1900.....	
	Placed August 9, 1900.....	
	94 lbs. shackles furnished by Jas. O'Donnell.....	10 34
Blonde rock whistling... .	Lifted and placed December 22, 1899.....	
Beaver harbour whistling	Lifted and replaced August 13, 1900.....	
Chebogue ledge..... .	Lifted and placed December 21, 1899.....	
	" " September 8, 1900.....	
Cat rock bell..... .	Placed December 21, 1899.....	
	Placed August 30, 1900.....	
	Repairs made by Jas. O'Donnell.....	37 10
	Chain from T. McAvity & Sons.....	140 31
Buck rock can..... .	Changed September 14, 1900.....	
Point prangle can... .	" " 1900.....	
Big duck island can.. .	" " 1900.....	
St. John's ledge..... .	Lifted and replaced November 25, 1899.....	
	" " August 31, 1900.....	
	Repaired by Jas. O'Donnell.....	9 38
Lurcher whistling. ....	Lifted and placed in position December 23, 1899.....	
	Went adrift in February, 1900.....	
	Salvage paid Str. <i>Westport</i> .....	150 00
	Placed March 22, 1900.....	
	Preparing moorings, &c.....	28 25
	Freight on anchor.....	7 50
	Advertising .. .	7 40
	New whistle placed June 20, 1900.....	
North-west ledge.... .	Went adrift in November, 1899.....	
	Salvage paid Str. <i>Westport</i> .....	100 00
	Replaced November 22, 1899.....	
	Lifted and replaced August 21, 1900.....	
	Advertising .. .	23 29
	Repairs by Jas. O'Donnell.....	167 65
Old man can .. .	Lifted and replaced November 28, 1899.....	
	" " September 8, 1900 .. .	
	Repairs.....	39 49
Old woman can..... .	Lifted and replaced November 27, 1899.....	
	" " September 8, 1900.....	
Peases ledge..... .	Changed from can to conical June 5, 1899.. .	
	Lifted and replaced September 8, 1900.....	
Peases island fairway bell	" " November 27, 1899.....	
	" " September 8, 1900.....	
Lepreau whistling. . .	Reported out of position, December 11, 1899.. .	
	Placed in position 15th January, 1900 .. .	
	Lifted and replaced 13th August, 1900.....	
	Whistle changed September 15, 1900 .. .	
	Shackles.....	8 91



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Important Buoys—*Continued.*

Name.	Nature of Work.	Cost.
Quaco buoys.....	Ledge buoy displaced September 6, 1899.....	
	Reef buoy upset September 20, 1899.....	
	Both placed by <i>Lansdowne</i> .....	
	Ledge buoy adrift December, 1899.....	
	Salvage paid Str. <i>Evangeline</i> .....	110 00
	Repairs.....	27 76
	Advertising.....	9 50
Roaring bull conical.....	Repairs.....	15 59
	Lifted and replaced December 21, 1899.....	
	New chain.....	72 04
	Lifted and replaced March 22, 1900.....	
	" " September 7, 1900.....	
Split rock whistling.....	Reported adrift November, 1899.....	
	Replaced November 14, 1899.....	
	Paid Str. <i>Neptune</i> for placing.....	65 00
	Removed and replaced November 30, 1899.....	
	" " January 13, 1900.....	
	Drifted 3 miles March 5, 1900.....	
	Replaced March 6, 1900.....	
	Paid Str. <i>Neptune</i> for placing.....	60 00
	Lifted and replaced August 9, 1900.....	
	Repairs and supplies, Jas. O'Donnell.....	50 68
	Other expenditures on buoy.....	25 00
South wolf whistling.....	Lifted and replaced January 24, 1900.....	
	" " April 30, 1900.....	
	" " August 20, 1900.....	
	" " " 29, 1900.....	
	Reported missing September 5, 1900.....	
	New buoy placed September 13, 1900.....	
	Went adrift in storm November 10, 1900.....	
	Buoy fittings, Jas. O'Donnell.....	25 91
	Chain, T. McAvity & Sons.....	250 40
Trinity ledge bell. ....	Lifted and replaced December 17, 1899.....	
	" " March 15, 1900.....	
	Went adrift, March, 1900.....	
	Salvage paid Str. <i>Westport</i> .....	150 00
	Chain.....	433 94
	Other expenses.....	35 81
Yarmouth bell.....	Lifted and replaced November 28, 1899.....	
	" " August 22, 1900.....	
N.W. whistling.....	" " December 21, 1898.....	
	Found out of position and replaced 22nd March, 1900.....	
	Lifted and replaced August 22, 1900.....	
S.W. whistling.....	" " October 31, 1899.....	
	" " April 20, 1900.....	
	Reported out of position May 14, 1900.....	
	Replaced May 28, 1900.....	
	Towing, &c., Hugh Cairn & Son.....	67 00

## PRINCE EDWARD ISLAND LIGHTHOUSE DIVISION.

The division is under the charge of Mr. Artemas Lord, who is agent of the department at Charlottetown, and also acts as inspector of lights for the district which embraces the whole province. The general routine of the office work has been, as formerly, performed by the agent, assisted by Mr. H. W. Mutch, as clerk and messenger. The work of building new lighthouses and superintending the more extensive repairs at existing stations has been done under the personal superintendence of Mr. M. Walsh, as foreman of works. Under the agent's instruction, Mr. Walsh is also warehouseman for the lighthouse stores in Charlottetown.

There are in the division 67 lights at 39 stations, and one fog horn, under the charge of 45 keepers. There are three automatic whistling buoys and one bell buoy. The majority of lights are situated on headlands and serve the general purposes of



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navigation, the remainder being harbour lights intended particularly for the benefit of fishermen. There are thirty harbours buoyed under the system of three year contracts, and seven in which buoys are maintained by the department under the local harbour masters.

All the stations on the island were inspected by the agent on the annual supply trip last summer which was made on the D.G.S. *Brant*.

#### DAMAGE BY STORM.

*Brighton Beach*.—On October 11, 1900, the back range light tower was blown down in a heavy gale.

A temporary light was immediately put in operation shown from a lantern hoisted between two poles.

*Tracadie*.—The tower, from which the back light was exhibited was upset by a gale on October 11, 1900. A temporary red light, hoisted on a mast, is maintained pending the re-erection of the tower.

*Annandale*.—The back range light tower was blown down by the gale of October 11 1900, and on November 20 it was found necessary to discontinue the exhibition of all the lights at this station for the remainder of the season to prevent confusion.

#### PRINCIPAL REPAIRS AT LIGHT STATIONS.

*Miminegash*.—The range lights heretofore shown from lanterns on masts, to indicate the entrance to Miminegash, in the Gulf of St. Lawrence, have been improved by substituting lights shown from inclosed towers for the exposed lanterns, and by changing the positions of the lightbuildings.

The front light is now shown from a square wooden tower, with sloping sides, surmounted by a square wooden lantern, the whole painted white, standing on the outer end of the south breakwater at the entrance to the pond. The building is 17 feet high from the pier to the ventilator on the lantern.

The light is a fixed catoptric light elevated 17 feet above high water mark. The light shows red over an arc of  $135^{\circ}$  between the bearings of N. E. round through E. to S., covering Miminegash reef, and white from S. to S.  $41^{\circ}$  W., over an arc of  $41^{\circ}$ , which includes the line of range.

The back light is a fixed white catoptric light, elevated 28 feet above high water mark, visible over a small arc on each side of the line of range.

It is shown from a square wooden tower, with sloping sides, surmounted by a square wooden lantern, the whole painted white. The building is 27 feet high, from its base to the ventilator on the lantern, and stands on a cribwork block on the beach of the pond, 720 feet S.  $11^{\circ}$  W. from the front tower.

The lights in one, lead to the entrance to the pond between the breakwaters, clear of all outlying dangers.

The towers were built last winter by days' labour, under the supervision of Mr. Milton Walsh, and cost \$254.30.

*Cape North*.—Extensive repairs and additions were made to the dwelling at this station, cost \$251.40.

Revolving gear having gone out of order, the whole machinery was removed and sent to the departments work shop at Charlottetown, where it was thoroughly cleaned and set up and tried, then taken back to station and set up and operated by Mr. Walsh. It has since been working in good order.

#### CHANGE IN RANGE LIGHTS AT CASCUMPEC.

The range lights hoisted on masts to indicate the channel over the bar at the entrance to Cascumpec harbour, on the north coast of the island, established last year,



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were this year replaced by better lights shown from towers, and the masts have been taken down.

The front tower stands on the sand hills south of the entrance, near the beach, 2,700 feet 22° E. from Cascumpec main lighthouse. It is 18 feet high from its base to the vane on the lantern, and is painted white. It consists of a square wooden lantern, standing on an open framework base, with the side of the framework facing the channel slatted to make it more conspicuous as a daymark.

The light is a fixed white light, elevated 20 feet above high water mark. The illuminating apparatus is dioptric of the seventh order.

The back tower stands on the sand hills, 611 feet S. 59° W. from the front one. It is a similar building, but is 23 feet high.

The light is a fixed white catoptric light, elevated 26 feet above high water mark.

These two range lights in one show the best water to cross the bar outside the sand hills at the entrance to Cascumpec harbour.

The buildings were erected by the agent, under supervision of Mr. Milton Walsh, at cost of \$183. The total expenditure on work at the station during the year was \$357.54.

MINOR REPAIRS.

Name.	Nature.	\$ cts.
Orwell.....	Moving light.....	12 00
Leard's front range.....	Repairs to deck.....	10 95
Grand river.....	General repairs.....	21 78
Little channel.....	Moving light.....	5 00
Murray harbour.....	General repairs.....	116 23
" (outer) ..	Repairs to breakwater....	76 00
New London.....	Protection... ..	50 00
Savage harbour.....	Moving light.....	45 69
Souris, east.....	New fence.....	37 26
St. Peter's island.....	New sails for boat. ....	38 33
West point.....	Repairs to woodshed.....	71 20
Darnley point.....	Moving back tower.....	10 00

BUOY SERVICE.

*West Point*—It was found necessary to remove the whistling buoy earlier than usual this season, in consequence of the difficulty of procuring a steamer that could handle so large a buoy. The maintenance of this buoy has always been attended with great difficulty.

*Summerside*—A cask, painted red, has been moored as a buoy in 20 feet water, 300 feet N.E. ½ E. from Indian point lighthouse, to mark the end of the spit running out beyond the lighthouse.

BRITISH COLUMBIA LIGHTHOUSE DIVISION.

This division comprises all Canadian waters on the Pacific coast and the inland navigation systems of British Columbia, and is under the charge of Captain James Gaudin, agent of the department at Victoria, who also acts as inspector of lights.

There are in this province twenty-eight light-stations, at six of which are steam fog-alarms, and at six others bells are rung by machinery. There are three beacon lights in Victoria harbour, and one similar light in Nanaimo harbour, which, as aids to navigation, are highly appreciated.

The lights are in charge of thirty light-keepers, some of whom supply assistance out of the salaries allowed.



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The lights are supplied by the Dominion steamer *Quadra*, Capt. J. T. Walbran, master, and the fog-alarm machinery at the several stations was periodically inspected by the engineers of the *Quadra*.

## NEW LIGHTS ESTABLISHED.

*Brotchy Ledge Beacon Lighted*—Brotchy ledge beacon, off the entrance to Victoria harbour, built in 1898, was made more conspicuous at night by showing from a square structure with sloping sides inclosed and painted white, standing eight feet above the deck of the beacon, a light, first established in February, 1900, as a white light occulted at short intervals. It is elevated eighteen feet above high water mark. The illuminating apparatus was a pressed glass lens.

The lamp was a thirty-one day oil lamp, on the Wigham principle, which would burn without constant attendance. It was found that the automatic occulting apparatus, which was designed to be turned by the heat of the flame, did not revolve properly, and this was consequently removed, and the light continued as a fixed white light until an electric cable, ordered from England, reached Victoria, in November, 1900. It was successfully laid by the crew of the *Quadra* in the same month, and a much more powerful fixed white light consisting of five incandescent electric lights substituted for the oil light. In the event of temporary failure of the supply of electricity the oil light will be shown.

It is proposed, ultimately, to make the light on this beacon an occulting light and to establish an electric horn as a fog signal.

*Walker Rock Light.*

A provisional stake light has been established on Walker rock beacon, Trincomali channel.

The light is a fixed white light, elevated fifteen feet above high water mark, and should be visible 5 miles all around the horizon. The light is shown from a small dioptric lantern. It is proposed to replace this by a more permanent arrangement.

*Improvements and repairs at existing stations.*

*Ivory Island*.—A new boathouse was built at a cost of \$89, and a new boat, costing \$45.00 supplied.

*Dryad Point*.—An addition has been built to the lighthouse to afford better accommodation for the keeper, at a cost of \$441.46.

*Egg Island*.—A breakwater to protect the lighthouse was constructed at a cost of \$188.24.

*Cape Mudge*.—Some large trees that endangered the safety of the buildings were felled at a cost of \$30. Outbuildings costing \$44 were erected.

*Point Atkinson*.—A new boathouse and barn were erected at this station. Total cost \$201.

*Active Pass*.—An addition was built to the dwelling at a cost of \$95.

*Bare Point*.—A floating landing was constructed at a cost of \$36.

*Fiddle Reef*.—Considerable protection work was placed around the boathouse and a new slip laid. Cost \$61.

*Carmanah Point*.—The reservoir at this station was enlarged and the tramway partly rebuilt and strengthened. Cost \$357.



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## MINOR REPAIRS.

Name.	Nature.	Cost.
Pointer island.....	New boat.....	\$45 00
Entrance island.....	" fence.....	70 00
Prospect point.....	Clearing.....	30 00
Brockton point.....	New boathouse.....	100 00
Race rocks.....	Repairs to reservoir..	72 00

## BUOYS AND BEACONS.

*Disappearance of Sturgeon Bank Beacons.*—The middle and north beacons on Sturgeon bank, at the mouth of the Fraser river, Strait of Georgia, British Columbia, have been carried away by the sea. It is not the present intention of this department to replace them.

*Comox.*—Captain T. P. Walker, R. N., H. M. S. *Warspite* reported on September 12, 1900, that the beacon on Grassy point, at the entrance to Port Augusta, had disappeared.

*Benmohr Rock.*—A wooden cage buoy has been placed on a rock in Trincomali channel, discovered by the *SS. Benmohr* and afterwards located by Capt. Walbran, of the *D.G.S. Quadra*

*Kelp Bar.*—Owing to the difficulty of maintaining the western beacon, it has been replaced by a spar buoy.

*Sturgeon Bank.*—The black pile beacon marking the outer edge of Sturgeon bank, off Sand Heads lighthouse, disappeared in October, 1900. In consequence of severe weather it was found impossible to replace it promptly, and, pending the erection of a beacon, a red can buoy, surmounted by a cage, has been placed to mark the edge of the bank near where the beacon stood.

*Sydney Spit.*—The wooden day beacon marking the north-west extremity of the spit, was blown down by a gale on October 27, 1900. It is proposed to rebuild the beacon, at an early date.

*Ganges Harbour.*—A steel can buoy, painted black, has been moored in 8-foot water on the one fathom patch, in Ganges harbour, Admiral island.

*False Reef, Stuart Channel.*—A steel can buoy, painted black and red in horizontal bands, has been moored in 14 fathoms, 350 feet southward of the extremity of this reef, entrance to Preedy harbour.

*White Rock.*—A large steel can buoy, surmounted by a cage, the whole painted red, has been moored in 6 fathoms on the extremity of the reef extending north-west wardly from White rock, at the junction of Trincomali and Stuart channels, on which the *S.S. Miami* stranded.

*Canoe Reef, Portier Pass.*—A steel can buoy, painted black, was, last spring, established off the south-east point of Canoe reef, Portier pass.

*Enterprise Reef.*—The beacon erected in 1887 on Enterprise reef, off the west entrance to Active pass, east of Vancouver island, has been replaced, by a more conspicuous beacon. The new structure of stone, surmounted by a wooden lattice work tripod and ball, stands on the site of the old beacon. The stonework is painted black and the tripod and ball white. The top of the beacon shows 20 feet above high water.

This work was done by the crew of the *Quadra* with outside help, and cost \$319.50.



[Inclosure B.]

LIST OF BUOYS MAINTAINED BY THE DEPARTMENT OF MARINE AND FISHERIES IN CANADIAN WATERS IN 1900.

ONTARIO.

	No. of buoys.		No. of buoys.
Amherstburg, including Bois Blanc.....	44	Pembroke.....	20
Bay of Quinte (three contracts).....	32	Point Pelee, gas buoys.....	2
Burlington Bay.....	1	Port Rowan.....	10
Collingwood.....	14	River Thames.....	7
Fiddlers Elbow.....	1	Rondeau.....	6
Gananoque Narrows.....	5	Lake Nipissing.....	32
Georgian Bay.....	11	Sault Ste. Marie.....	20
Green Shoal.....	1	" " canal approaches.....	25
Grecian Shoal.....	1	South Baymouth.....	4
Grosse Point.....	6	Lake Superior.....	7
Kaministiquia.....	19	Trenton.....	11
Kennedy Shoal.....	1	Point au Baril.....	15 beacons and
Kingston.....	19	Surprise Shoal, bell buoy.....	1
Little Current.....	6	Penetanguishene.....	10
Lake of the Woods.....	144	Red Horse Rock.....	1
Lone Rock, bell buoy.....	1	St. Joseph Channel.....	4
Midland.....	7	Port Arthur.....	1
Murray Canal and Presqu'ile Bay.....	23	Lake Simcoe.....	1
North Sisters Rock, Ont.....	4	Pancake Shoal, bell buoy.....	1
Napanee.....	14	Tin Cap Shoal.....	2
Niagara, bell buoy.....	1	Byng Inlet.....	7
Orilia.....	6	Stokes Bay.....	6
Parry Sound.....	24	Bears Rump.....	1
" gas buoys.....	3		

QUEBEC.

	No. of buoys.		No. of buoys.
House Harbour, Magdalen Islands.....	6	St. Ann River.....	1
Bersimis and Outard Bay.....	10	St. Thomas.....	8
Cap Chatte.....	1	St. Placide, stakes.....	40 or 50
Carleton Point.....	1	St. Adelaide de Pabos.....	1
Chicoutimi.....	13	North Channel, Island of Orleans.....	10
Cock Point.....	1	Cape Cove.....	1
Fox River.....	1	Bonaventure.....	1
Gaspé.....	5	St. Lawrence River between Montreal and	
Lachine and Lake St. Louis.....	23	Quebec.....	258
Lake St. Francis.....	36	Eschourie Rock.....	2
Matane.....	3	Grand Entry.....	5
New Richmond.....	4	Amherst Harbour.....	8
Paspebiac.....	1	Richelieu Rapids, bushes.....	
Percé.....	2	Maintained by Agency, gas buoys.....	11
Richelieu River (two contracts).....	47	" " smaller buoys.....	40
Rivière des Prairies.....	10		



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LIST of Buoys maintained by the Department of Marine and Fisheries, &c.—*Continued.*

## NEW BRUNSWICK.

	No. of buoys.		No. of buoys.
Bathurst.....	26	Napan River, 24 stakes.....	3
Bay Verte.....	36	Oak Bay and Restigouche.....	6
Beaver and Blacks Harbour.....	9	Oromocto.....	7
Bay du Vin.....	4	Pisarinco.....	2
St. John River.....	68	Pokemouche.....	5
Black Brook, Miramichi River.....	3	Quaco.....	3
Black Land Gully.....	12	Richibucto and Albion.....	28
Buctouche.....	16	Richibucto, Kingston and Brown's Yard..	30
Campobello.....	10	Shediac.....	11
Caraquet.....	20	Shippegan.....	19
Cocagne, stakes, 50.....	11	St. Andrews.....	15
Dalhousie and Restigouche.....	10	St. Croix Ledge.....	11
Didgequash.....	5	Tabusintac.....	17
Dorchester.....	3	Tracadie.....	19
Grand Lake and Salmon River.....	73	Washadamoak.....	2
Grand Manan.....	30	West Isles.....(4 spindles)	23
Great Shemogue.....	7	Maquapit and French Lakes.....	24
Harvey.....	7	Grande Anse.....	4
Letete and Back Bay.....	21	Petit Rocher.....	
Lepreaux.....	3	North-west Arm, Miramichi.....	6
Little Shemogue.....	6	Marsh Point.....	1
Little Shippegan and Miscou.....	12	Dipper Harbour.....	3
Magaguadavic.....	13	Buctouche River.....	18
Miramichi.....	18	Tynemouth Creek.....	3
Musquosh.....	7	Maintained by Agency, signal buoys..	9
Neguac.....	19	" can and conical buoys.....	10

## PRINCE EDWARD ISLAND.

	No. of buoys.		No. of buoys.
Bay Fortune.....	3	Montague.....	6
Beach Point.....	3	Murray Harbour.....	33
Bedeque.....	11	New London.....	11
Cardigan, Lower.....	5	Orwell and Vernon River.....	6
" Upper.....	11	Pinette.....	5
Cascumpec.....	14	Port Hill.....	9
Charlottetown.....	42	Pownal.....	7
Cove Head.....	2	Rollo Bay.....	3
Crapaud.....	6	Rustico.....	5
East River (Hillsboro').....	17	Savage Harbour.....	2
Egmont Bay.....	10	Souris.....	4
Georgetown.....	13	St. Peters Harbour.....	8
Goose Harbour.....	2	Summerside.....	11
Grand River.....	12	Tracadie.....	3
Grand River, lot 14.....	8	West Point.....	1
Indian Rocks.....	1	Wood Island.....	1
Malpeque.....	16	Egmont Bay.....	2
Miminegash.....	3	Brae Harbour.....	5
Little Channel.....	3	Maintained by Agency, signal buoys.....	3



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LIST of Buoys maintained by the Department of Marine and Fisheries, &c.—*Continued*

## NOVA SCOTIA.

	No. of buoys.		No. of buoys.
Advocate Harbour.....	5	Monsellier .....	10
Apple River.....	8	McKinnon's Harbour.....	4
Arichat.....	16	Musquodoboit.....	7
Argyle River and Sound.....	10	Northport.....	12
Avon River .....	5	North Sydney.....	5
Barrington.....	35	Parrsboro.....	7
Bear River.....	12	Petit de Grat.....	10
Beaver Harbour.....	2	Pictou.....	3
Birchton.....	5	Popes Harbour.....	3
Bridgewater.....	10	Port Hood.....	7
Canso and St. Andrew's Passage.....	28	Port Le Tour.....	11
Cape Negro or North-East Harbour.....	14	Port Medway.....	9
Caribou.....	6	Port Morien.....	2
Cheticamp.....	12	Pubnico.....	16
Chezzetcook and Petpiswick.....	6	Pugwash.....	8
Christmas Island and Barra Strait.....	11	Prospect, Lower.....	10
Clarks Cove, West Bay.....	3	River John.....	3
Clarks Harbour.....	17	St. Anns.....	2
Cockerwit Pass and Woods Harbour.....	15	St. Marys River.....	8
Crow Harbour.....	3	St. Peters Bay.....	16
D'Ecouse.....	8	St. Peters Inlet.....	11
Chester.....	5	Sambro.....	9
Digby and Annapolis.....	7	Shag Harbour.....	12
Dover.....	4	Sheet Harbour.....	9
Dipper Harbour.....	3	Shelburne.....	10
Great Bras d'Or.....	7	Tatamagouche.....	18
Guysborough.....	3	Terrence Bay.....	3
Hay Cove.....	8	Tor Bay.....	19
Harbour au Bouche.....(6 stakes)	4	Three Fathom Harbour.....	5
Ingonish, South Bay.....	8	Tidnish.....	5
Isaacs Harbour.....	1	Tusket.....(3 spindles)	23
Janvrin.....	4	Upper Prospect.....	4
Jeddore.....	11	Wallace.....	5
Judique.....	1	West Bay.....	3
Ketch Harbour.....	13	Westport.....	3
L'Ardoise.....	2	Weymouth.....	13
La Have.....	8	Whitehead.....	9
Lennox Passage.....	17	West Dublin and Crooked Channel.....	13
Little Narrows.....	10	Yarmouth.....	50
Liverpool.....	3	Smith's Island.....	1
Lockeport.....	6	Ship Rock.....	1
Lunenburg.....	9	Sydney.....	2
Lunenburg, Back Cove.....	9	Shulee.....	8
Lunenburg, Middle South.....	16	East Bay Bras d'Or.....	2
Louisbourg.....	7	Port Félix.....	7
Mabou.....	12	Chester Martin's Pt.....	3
Mahone Bay and Chester.....	12	Gillis Point, Boulaceet Harbour.....	1
Main-à-Dieu.....	6	Tangier.....	4
Margaree Harbour.....	9	Maintained by Agency..(Whistling buoys)	21
Martins Brook.....	6	" " " " (Bell buoys)	17
Merigomish.....	6	" " " " (Can buoys)	25



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LIST of Buoys maintained by the Department of Marine and Fisheries, &c.—*Continued.*

## BRITISH COLUMBIA.

	No. of buoys.		No. of buoys.
Benmohr Rock... ..(Platform and cage)	1	Village Point, Baynes Sound.....(Spar )	1
Gossip Reef.....(Wooden can)	1	Victoria Harbour.....(Wooden cage)	2
False Reef.....(Iron can)	1	" ".....(Spar )	1
Lighthouse Island.....(Conical )	1	Esquimalt Harbour.....( " )	2
Point Grey.....(Iron can)	1	" ".....(Conical)	1
Six Fathom Patch... ..( " )	1	Nanaimo.....(Platform wooden cage)	8
Hodgson Reef.....( " )	1	Sand Heads, Fraser River (1 bell & 13 iron)	14
Horsewell Reef.....(Conical )	1	Black Rock.....(Spar buoy)	1
Reef Point, M. I....( " )	1	Rosdale Reef.....(Large steel " )	1
Clarke Rock.....(Wooden can)	1	Johnson Reef ....(Small steel " )	1
Ledge Point.....( " spar)	1	Celia Reef.....( " " )	1
Burnaby Reef.....( " " )	1	Virago Rock, Portier Pass....(Spar buoy)	1
Dall Patch .....(Cage)	1	Indian Island.....(Can " )	1
Alford Reef.....(Can )	1	First Narrows.....(Spar " )	1
Houston.....( " )	1	West Rock.....(Large can )	1
Clayoquet Sd.....(Small " )	2	" ".....(Spar )	1
Cortez Isd.....( " )	1	Canoe Islet.....(Can )	1
Entrance Pt.....(Spar )	1	" Pass.....(Spar 13 and can)	1
Miami Reef .....(Can with Cage)	1	Rosenfelt Reef.....	
Sparrowhawk Rock.....(Spar )	1	Pt. Saturna.....(Conical)	1
Kelp Point, Baynes Sound.....(Conical)	2	Kootenay Lake.....(Platform)	11

(Inclosure C.)

## ANNUAL REPORT OF THE OFFICER IN CHARGE OF THE HYDROGRAPHIC SURVEY OF THE GREAT LAKES.

## HYDROGRAPHIC SURVEY,

OTTAWA, December 3, 1900.

The Chief Engineer,  
Department of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to report as follows, upon the work of the Hydrographic Survey during the past year :—

Last winter a fair copy of the work done between Duck islands, Lake Huron and Cove island, including Manitoulin gulf was forwarded, in two sheets, to the Hydrographer of the Admiralty for engraving and publication. Owing to a great pressure of work at the Hydrographic Office, London, no sheets have yet been issued for Lake Huron, but I understand the western one should be ready for distribution before the opening of navigation, 1901.

Owing to the first complete edition of the Georgian Bay and North Channel Pilot having been entirely exhausted, a new one was prepared and issued last April.

The *Bayfield*, with the usual complement of officers and men, left Owen Sound on May 2, but had to return on the 5th for repairs to the main steam pipe. On the 8th a second start was made and work resumed at Lyal island, Lake Huron. At the close of the season Clark point was reached, 60 miles from the starting point for the season. Off this shore soundings were carried an average distance of 12 miles to deep water. The area surveyed was 750 square miles, 1,100 miles of sounding were done from the deck of the steamer in the deeper water, and 1,100 miles from the boats over the shallow areas. 110 miles of traversing was done.

A thorough survey of the water around the Indian or Fishing islands was made, showing several good anchorages for small craft, but they are not of much use to strangers in their present unbuoyed state. Large vessels seeking shelter near this shore



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must proceed to Stokes bay. Harbour surveys were made of Saugeen river, Port Elgin, Kincardine and Southampton. The first three harbours are small with shallow entrances and cannot be entered in stormy weather. Southampton is a harbour of refuge but the anchorage space is very limited, dangerous boulders are scattered about, and the present range lights lead over dangerously shoal water at a mile from the breakwater. A large sum of money has been spent to give protection here, but much more is needed both for dredging and breakwaters. I placed two spar buoys upon two very dangerous boulders lying in the track of vessels.

Outside the dangerous reefs, that front most of the shore for, often, more than a mile, no outlying dangers were discovered. The water gradually deepens, sometimes to 80 fathoms at the outer ends of the sounding lines off Chantry island and sometimes to only 20 fathoms, north of Clark point.

Careful observations, for the variation of the magnetic needle, were made with a unifilar magnetometer, at several points along the shore. A full list, of all the variations obtained, since the acquisition of a magnetometer in 1896, is annexed.

The latitude of Chantry island lighthouse was obtained by sextant and artificial horizon. North and south culminating stars were observed upon 9 nights and the mean result ( $44^{\circ} 29' 23''.08$  N.) accepted.

The longitude of the same point was derived, from the triangulation and azimuths observed during the season, from both Cove island lighthouse and Goderich court-house. It is  $81^{\circ} 24' 08''.55$  West.

The triangulation was again carried along shore by using the steamer for the off shore vertices of the triangles. The distance from Cove island light-house to Goderich court-house thus found was very nearly that obtained geodetically.

Of Lake Huron, only about 60 miles of shore line, still remains to be surveyed. This piece of shore is nearly straight and has no off lying shoals, so that it is not very important.

The weather during the past season was not favourable for surveying work. The ice did not leave the shore till May 13. After that for a couple of weeks the weather was stormy, cold and damp. The middle of the season was very hot and the air full of haze that compelled us to keep within a couple miles of shore. The autumn was about average.

During the coming winter fair copies of the work from Cove island to Clark point will be prepared for the Hydrographer of the Admiralty and sailing directions for the Canadian shore of Lake Huron written.

Upon the completion of the survey of Lake Huron during the coming season, Lake Superior should be started, and for such a large lake the old *Bayfield* is both too weak and too slow as well as being too hard on fuel, that will be difficult to obtain. She was built of wood in 1863, and until the department purchased her in 1884 was engaged in heavy towing operations on the lakes. In 1883 a new boiler was placed in her and it is still doing service. Her engine is the one originally placed in her, is high pressure, hard on fuel, and not powerful enough. In 1893 the Steamboat Inspector condemned her, but as no one made an offer to buy her, when advertised for sale, she was put in service with orders to use only in fine weather. Where harbours were plentiful and easy of access as in Georgian bay this was all right, but on the east shore of Lake Huron it is difficult to keep out of the way of storms. For work upon the shores of the lakes now unsurveyed, principally Lake Superior, a larger, stronger and faster vessel is urgently required, or the important work will have to be abandoned.

To my assistants Messrs. F. Anderson and R. E. Tyrwhitt, the officers of the steamer, Capt. A. M. MacGregor and First Engineer, John Nisbet, my thanks are tendered for their close attention to duty at all times during the past season.

I have the honour to be sir,  
Your obedient servant,

WM. J. STEWART,  
*Officer in charge of Hydrographic Survey.*



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## CANADIAN HYDROGRAPHIC SURVEY—MAGNETIC OBSERVATIONS.

## MEAN of Eastern and Western Elongations.

Name of Station.	Latitude, N.		Longitude, W.		Date.	Observed Declination.		Observer.
	°	'	°	'		°	'	
Port Colborne.....	42	52.8	79	15.6	Oct. 9, 1896..	5	22.6	W. J. Stewart.
".....	42	52.8	79	15.6	" 10, 1896..	5	21.3	"
".....	42	52.8	79	15.6	" 11, 1896..	5	26.8	"
Long Point (Lake Erie).....	42	33.7	80	07.5	" 7, 1896..	3	54.7	"
".....	42	33.7	80	07.5	" 8, 1896..	3	55.2	"
Reid Island (Parry Sound).....	45	19.3	80	16.5	Apr. 27, 1898..	6	38.3	F. Anderson.
".....	45	19.3	80	16.5	" 29, 1898..	6	37.6	"
Owen Sound.....	44	34.2	80	55.5	Oct. 26, 1897..	5	25.5	J. F. Fraser.
".....	44	34.2	80	55.5	" 27, 1897..	5	27.9	"
".....	44	34.2	80	55.5	" 28, 1897..	5	26.2	"
Burke Island.....	44	46.0	81	18.6	" 17, 1900..	5	41.2	F. Anderson.
".....	44	46.0	81	18.6	" 18, 1900..	5	42.3	"
Garden Island (Stokes Bay)....	44	59.5	81	22.8	" 14, 1899..	5	54.5	"
".....	44	59.5	81	22.8	" 15, 1899..	5	54.1	"
".....	44	59.5	81	22.8	" 16, 1899..	5	54.5	"
Chantry Island.....	44	29.7	81	24.4	" 9, 1900..	5	54.1	"
".....	44	29.7	81	24.4	" 10, 1900..	5	52.0	"
".....	44	29.7	81	24.4	" 11, 1900..	5	53.8	"
Club Island.....	45	33.6	81	35.73	" 23, 1900..	6	34.2	W. J. Stewart.
".....	45	33.6	81	35.73	" 24, 1900..	6	29.8	"
Kincardine.....	44	10.7	81	37.1	Sept. 13, 1900..	4	46.5	F. Anderson.
".....	44	10.7	81	37.1	" 14, 1900..	4	45.7	"
".....	44	10.7	81	37.1	" 15, 1900..	4	43.8	"
Warner Bay.....	45	11.2	81	38.2	Aug. 18, 1899..	6	25.2	"
Tobermory Harbour.....	45	15.55	81	40.7	July 9, 1899..	6	44.1	W. J. Stewart.
Rattlesnake ".....	45	31.9	81	42.8	Oct. 23, 1899..	6	22.7	F. Anderson.
Cove Island.....	45	19.0	81	43.8	" 23, 1897..	6	52.0	W. J. Stewart.
".....	45	19.0	81	43.8	" 24, 1897..	6	53.3	"
".....	45	19.1	81	43.9	" 22, 1897..	6	57.6	"
".....	45	19.6	81	44.2	June 30, 1898..	6	53.0	F. Anderson.
".....	45	19.6	81	44.2	July 3, 1898..	6	53.4	"
".....	45	19.6	81	44.2	" 6, 1898..	6	52.7	"
S. W. Pt. Fitzwilliam Island..	45	26.2	81	48.55	Oct. 24, 1899..	4	30.5	W. J. Stewart.
Pt. aux Pins (Lake Erie)....	42	15.5	81	52.2	" 1, 1896..	2	07.4	"
".....	42	15.5	81	52.2	" 2, 1896..	2	06.2	"
".....	42	15.5	81	52.2	" 3, 1896..	2	07.7	"
Little Current.....	45	59.05	81	55.25	" 20, 1900..	4	28.1	F. Anderson.
".....	45	59.05	81	55.25	" 21, 1900..	4	24.7	"
".....	45	59.05	81	55.25	" 22, 1900..	4	17.5	"
South Bay Mouth.....	45	34.0	82	00.4	" 18, 1898..	3	52.8	"
".....	45	34.0	82	00.4	" 19, 1898..	3	46.5	"
".....	45	34.0	82	00.4	" 20, 1898..	3	44.7	"
".....	45	34.0	82	00.4	" 21, 1898..	3	46.2	"
".....	45	34.0	82	00.4	June 12, 1899..	3	45.8	"
".....	45	34.0	82	00.4	" 13, 1899..	3	47.7	"
".....	45	34.0	82	00.4	" 14, 1899..	3	47.6	"
Misery Bay.....	45	47.1	82	44.6	Aug. 9, 1898..	3	18.6	"
".....	45	47.1	82	44.6	" 10, 1898..	3	17.3	"
Outer Duck Island.....	45	39.2	82	55.5	Sept. 7, 1897..	2	05.3	J. F. Fraser.
".....	45	39.2	82	55.5	" 8, 1897..	2	07.7	"
".....	45	39.2	82	55.5	" 9, 1897..	2	09.4	"
Great Duck Island.....	45	39.3	82	56.0	Oct. 6, 1897..	2	00.0	"
".....	45	39.3	82	56.0	" 7, 1897..	2	00.4	"
Burnt Island.....	45	49.2	82	57.1	Sept. 19, 1897..	3	07.7	"
".....	45	49.2	82	57.1	" 20, 1897..	3	08.8	"
".....	45	49.2	82	57.1	" 21, 1897..	3	05.1	"
Little Cockburn Island.....	45	54.45	83	29.85	Oct. 19, 1897..	3	30.1	"
".....	45	54.45	83	29.85	" 20, 1897..	3	30.8	"
".....	45	54.45	83	29.85	" 21, 1897..	3	24.8	"

WM. J. STEWART,  
Officer in charge Hydrographic Survey.



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(Inclosure D.)

## SURVEY OF TIDES AND CURRENTS IN CANADIAN WATERS.

OTTAWA, December 20, 1900.

W. P. ANDERSON, Esq., C.E.,  
Chief Engineer, Department of Marine and Fisheries.

SIR,—I have the honour to submit the following Report on the progress of this Survey. The principal tidal stations have been maintained in continuous operation throughout the year, and progress has been made in the reduction of the results, and in the use made of them to improve the tide tables, now regularly issued. During the summer season, a series of tidal stations was established throughout the Lower St. Lawrence, from Quebec to Cape Chatte. For these stations, points were selected which would secure the greatest amount of information regarding the relation between the tidal currents on the St. Lawrence, and the tides themselves. Some direct observations of the currents were also made in the Traverse. Another important step, is the calculation and publication of tide tables for British Columbia.

Progress in these directions has been made possible by the increased amount of the appropriation for this Survey. As soon as the increase was decided upon, the tidal records from British Columbia, which had been reduced to figures in tabular form and had been lying in readiness for some time back, were at once sent forward to London, where the analysis of the record is made. Through this promptitude, it was possible to secure tide tables for 1901 in time for publication before the close of the present year. These will be of much service to navigation on our west coast.

In the last report on this Survey, full comparative statements were given, to show the improvement in the accuracy of tide tables which had already been secured by the investigations made. Comparative tables were also given to show the difference still outstanding between the improved tide tables now issued by this Survey, and the tides themselves as observed. From these comparisons, it appeared that the greatest difference between the two, or the greatest outstanding error, occurred at Quebec. It was therefore deemed to be of the most service, to reduce two additional years of the tidal record from that harbour, in order to extend the basis from which the Quebec tide tables are calculated, from two years of observation to four years. This will be of permanent benefit to these tide tables in all future years. The expenditure required for this, amounts to \$450 which the Survey could not afford until now. This again illustrates the way in which any increase in the appropriation for this Survey can at once be applied to practical advantage.

This is as much as could be done in one year in this direction; but for other harbours in their turn, a similar improvement will be secured as means are available. In the office work of this Survey, and in the erection of the summer tidal stations, I have had the assistance of Mr. R. Angus and Mr. S. C. Hayden.

The total expenditure on this Survey during the fiscal year from June 30, 1899, to June 30, 1900, was \$4,343.10. This includes an amount of \$378.08 properly chargeable to the tidal observations on the Lower St. Lawrence during this season.

*Applications for Information.*—As the Survey becomes more widely known, the requests for information and the correspondence resulting, continue to increase. Without attempting to enumerate all the requests for copies of reports and tide tables, the following applications for information may deserve mention:—

The Superintendent of the United States Coast Survey in acknowledging the report of progress containing tidal constants for three of our harbours, for which request had been made, writes as follows:—‘Your valuable report was received too late to



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benefit our 1900 tables ; but use will be made of the data given there, in our Tide Tables for 1901, and acknowledged to your survey.'

The Consul for Sweden and Norway made request for a number of sets of Tidal Survey reports for distribution amongst Norwegian steamers employed in the coal trade between Montreal and the Lower Provinces. A sufficient number of reports were sent in reply ; as well as further information asked for, regarding Belle Isle strait and the Bay of Fundy. In acknowledging these the Consul says :—' I shall make it part of my duty, as far as lies in my power, to distribute these amongst Norwegian steamers to whom they may be of the greatest interest.'

On request of the secretary of the Pilotage Commissioners of St. John N. B., thirty copies of the tide tables in which St. John is included, were sent for the information of the pilots at that port.

The tide-levels, which have always to be carefully worked out for the reduction of the tidal observations, often prove of important service also, in connection with harbour works ; as the following requests for correct tidal levels will indicate :—

Mr. A. J. Stevens, I. C. R. engineer, in determining the depth required for the Intercolonial railway docks at Richmond, and the Deep Water terminus at Halifax, makes request for : ' A low water datum which can be relied upon for security to ships, by shippers and the railway alike. These docks are used by the largest ships upon the Atlantic. They must never touch bottom.'

Major Roberts, superintendent of signals at Halifax, required to carry the low-water datum over to St. George's island ; and also desired information from which to make a table of the half-hourly height of the tide ; which was supplied.

Mr. C. E. W. Dodwell, Resident Engineer of Public Works for Nova Scotia, applied for the elevation of high water at ordinary spring tides, at Windsor, N. S.; for reference in connection with works in progress for the improvement of that port.

On application from Mr. E. T. P. Shewen, Resident Engineer of Public Works at St. John, N. B., some three hundred readings of the height of the tide have been supplied to him, from the tide gauge at St. John ; in addition to the series mentioned in a former report. These were required for the reduction of soundings taken for the survey of that harbour.

These may serve as examples of the accessory ways in which this Survey often proves of value, in addition to its direct service to the shipping interest.

## THE PRINCIPAL TIDAL STATIONS.

These stations have been in continuous operation throughout the past year, with some minor exceptions. The stations at Forteau bay in Belle Isle strait, and at St. Paul island, Yarmouth, Father Point and Quebec, were inspected this season by myself or Captain Douglas ; and some important work done, which will better insure the continuity of the tidal record, and enhance its value.

At Forteau bay in Belle Isle strait, the tide house had settled when the gauge was damaged by a gale in November, 1897 ; and it was afterwards levelled up, when the new crib-work was built in September, 1898. The levels being thus disturbed, there was no longer the means of reducing the observations to a uniform datum. Even the wharf-gauge scale itself had been altered in elevation, in making the necessary repairs. The distance from Ottawa to Forteau bay has now been reduced from 2,100 miles to 1,600 miles, by the new route via North Sydney and the west coast of Newfoundland ; but owing to the steamer connections being out of order this season, through an accident to one of the vessels in the service, a full month was taken up, after reaching North Sydney, to secure ten days at Forteau bay. It is thus something of an undertaking to visit this station, as it breaks into the time in the most important part of the year.

Owing to uncertainty in the levels, because of the changes above noted, the tidal record at Forteau bay for a period of two years, was deprived of nearly half its value. The special object in visiting the station was, therefore, to re-determine the levels as far back as 1898, and thus to restore the continuity of the datum. It was a problem



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complicated by the inter-relations of the various changes that had taken place; but technical difficulties need not be explained here, though it may be in place to remark that trouble of this character is always likely to arise when the tide gauges have to be placed on crib-work or other timber-work, which is liable to displacement or settlement. When they have to be so built, owing to the want of masonry on which to set them, the closest watchfulness is necessary; and instrumental levels have to be repeated at frequent intervals, with check calculations in the office. Otherwise a uniform datum level, which is essential for the observations, cannot be maintained.

As a precautionary measure, to enable any settlement to be detected more readily, a bronze bolt was let into a vertical face of rock at about half-tide. This rock forms a reef in the vicinity of the gauge, which is covered at high water. The reading on the wharf scale when the water is at the level of this bolt, is posted up in the tide-house for reference. An improvement in the sight-gauge has also been made by using wooden rods for the connection between its scale and the float which rises and falls with the tide. This is to avoid the possibility of alteration in its length; and it has now been carefully adjusted to standard length. Several other minor improvements were also made.

At St. Paul island similar difficulty has been met with, in maintaining a uniform datum level. A scale of feet was originally cut on the face of the rock for reference; but this has been effaced by the heavy ice of winter. It is seldom in any case that there is not too heavy a swell to obtain satisfactory readings on such a scale. Entire dependence has therefore to be placed on the sight-gauge, to furnish the datum level. The tide-house had to be raised twenty-four feet above high water, to prevent it from being carried away in winter storms; and this makes the length of the sight-gauge too great to use wooden rods for the connection between its scale and the tide-float. For this connection, heavy nickel wire, made up into chain of 6-inch links, has now been adopted. This gives every promise of success; as it had already proved satisfactory throughout the previous winter at the Halifax gauge.

The rock of which the cliffs are composed and against which the tide gauge is set, is so crumbling that reference marks for the levels are soon lost. A bronze bolt has therefore been drilled into the rock for this purpose; and by these improvements it is hoped that a uniform datum will be more certainly and conveniently maintained; and that the amount of office work required for the reduction of the observations to datum, will be appreciably decreased.

The diploidoscopes, which give the correct time from the sun, were adjusted by astronomical observations at both Forteau bay and St. Paul island. The barographs, which give a continuous record of the height of the barometer, were also adjusted at both stations.

At Father Point, extended observations were taken in August to compare the actual rise and fall of the tide on the open beach, with the record given by the instrument; as this gauge works by siphoning through an inlet pipe nearly 400 feet long. Simultaneous comparisons were made every two or three minutes for several hours at a time, on fine days during the time of the spring tides. The results need not here be detailed. When compiled with the similar observations obtained the year before, they afford a table of correction to be applied to the height of the tide, to allow for the siphoning action of the gauge. This is essential in the reduction of the observations.

At Quebec, a favourable opportunity was taken to secure a further series of comparisons, to determine the relation between the zero of the tide gauge and the scale of feet cut on the masonry of the dry dock on which the gauge stands.

#### TIDAL RECORD OBTAINED AT THE PRINCIPAL STATIONS.

The record obtained has been practically continuous during the year, at the seven east coast stations, as well as at the two tidal stations in British Columbia. The causes of interruption may be cited briefly, as examples of the nature of the difficulties to be met, against which foresight is required.



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The gauge at Yarmouth, N.S. was fitted up originally in 1898 as a summer station without any provision for heating in winter, as the climate is milder there than at any of the other principal stations. (See comparative temperatures given in last year's report.) Some special precautions were taken to prevent the formation of ice in winter, as explained in last report; but notwithstanding these, more than a month of record was lost during the first winter, in February of 1899. During the past winter however, the only loss on account of frost was from February 5 to 7, and from February 28 to March 5, 1900; a total of nine days.

At St. John, N.B., there was repeated trouble between January and April, on account of the breakage of the fine platinum wire which connects the tide float with the mechanism of the recording instrument. The trouble was finally remedied; but there remains much office work to be done, in filling in the parts of the tide-curves which are thus missing. The gaps can better be made up in this way, than by calculation.

At Halifax, the hair-spring of the driving clock of the gauge broke twice, in the months of June and July. Some spare hair-springs had been obtained from the makers of the gauge in Glasgow, and placed in charge of a leading watch-maker in Halifax; and because of this precaution, the interruption from these accidents was limited to one or two days on each occasion.

At Father Point, at the end of July, choakage occurred in the intake pipe that admits the water to the gauge, by which five days record was lost. To remedy this, the outer end of the pipes had to be disconnected; and it was not until the low spring tides of the middle of August, that they could be re-laid. During the interval, the record of some low waters was lost, as the pipes did not then reach to the lowest tides.

At the other principal tidal stations, namely, Quebec, St. Paul island, and Forteau bay, there was no interruption in the record obtained.

The total amount of tidal record obtained at the principal stations up to the end of 1898, was given in a summary form in Table D, appended to last year's Report of Progress.

## TIDE TABLES FOR 1900 AND 1901. IMPROVEMENTS, PUBLICATION, &amp;c.

Several improvements on previous years have been made in the preparation and publication of the tide tables issued by this Survey. A considerable part of the advantage of the work which has now been done, will appear when the tide tables for 1901 are issued; whereas the reduction of additional record and its analysis to extend the basis from which the tide tables are calculated, will first benefit the tables for 1902. The progress made may be best explained, therefore, under the heading of the years in which the tide tables will be improved by the work now done.

*Tidal differences in the Bay of Fundy.*—In the tide tables of 1900 for the harbours of Quebec, Halifax and St. John, N. B., a slip was inserted giving the preliminary results of the tidal observations, in the Bay of Fundy. A complete set of tidal differences for the whole of this bay has now been prepared, which will appear in the tide tables for 1901. They are based upon a comparison of the tidal observations obtained at the stations of 1898, with the 'Establishments' as already determined by the Admiralty for intermediate points. This comparison affords a valuable check upon the Establishments themselves; and places the time of the tide throughout this bay upon a reliable basis. The importance to navigation of a correct knowledge of the tide in this bay is evident, when the range of the tide is so great. In addition to the tidal differences which enable the time of the tide to be found, the available draught of water at spring and neap tides is given, for points in the upper part of the bay. Navigation may there be said to be entirely dependent on the tide, as the wharfs do not extend beyond half-tide mark, and vessels can therefore only reach their berths at high water.

*New Tide Tables for British Columbia.*—These are based upon the record obtained from registering tide gauges erected in 1895 by the Department of Public Works. One of these is at Sand Heads at the outlet of the Fraser river, on the coast of the Strait of Georgia. It is thus centrally situated in that strait for comparison with the time of the tide at the harbours around it. Another tide gauge was originally placed at Victoria, in 1895; where two full years of tidal record have been secured. This gauge was



afterwards removed to the Dry Dock at Esquimalt, in May, 1897 ; where it has been in continuous operation to date.

Duplicate copies of these records where furnished to this Survey in the form of blue prints ; but the whole set was lost in the fire in the departmental buildings in February, 1897. A second set from the Department of Public Works was fortunately obtained before the whole of the original record was destroyed in the extensive fire at New Westminster, in August, 1898. This emphasises the risk run, in allowing a record of such value to stand over for so long, before it is submitted to analysis. It is therefore reassuring to report that there are now three years of this record from which tidal constants have been determined ; which thus places the results from this portion of it, in a position of equal security with the movements of the sun and moon themselves.

The length of record on which these tide tables are now based, is as follows :—  
Victoria, on one full year, from April 1, 1895, to April 30, 1896.

Sand Heads, Fraser river, on two years, from May 1, 1895, to May 31, 1896 ; and from October 1, 1896, to October 28, 1897.

These tables will be of much service to our west coast, because of the complication of the tides there, which results from the large diurnal inequality. Heretofore, the best approximations available were those given in the tide tables of the United States Coast Survey ; where the tides in the Strait of Georgia are referred to Port Townsend at the mouth of Puget Sound, and the tides at Victoria are deduced from Galveston on the Gulf of Mexico.

The tides at Victoria apparently, cannot be referred to the United States tidal station at Port Townsend, and the results obtained for the Strait of Georgia have been far from satisfactory ; which in all probability is due to an alteration in the character or type of the tide after it enters the Strait of Fuca. This change is made clear now that the tidal constants have been obtained, as a comparison of the leading harmonic components given below will show. The progress of the tide is in the order of the columns. While there is a general increase in the values, in correspondence with the increase in the range of the tide itself, the proportions between the diurnal and semi-diurnal components are profoundly modified.

Symbol.	Tidal Component.	VICTORIA. (Strait of Fuca.)	PORT TOWNSEND. (Puget Sound.)	SAND HEADS. (Strait of Georgia.)
M <sub>2</sub>	Lunar semi-diurnal .....	1·23 feet.	2·22 feet.	2·81 feet.
S <sub>2</sub>	Solar semi-diurnal .....	0·33 "	0·55 "	0·68 "
K <sub>2</sub>	Luni-solar semi-diurnal.....	0·08 "	0·16 "	0·22 "
K <sub>1</sub>	Luni-solar diurnal .....	2·05 "	2·51 "	2·70 "
O	Lunar diurnal.....	1·24 "	1·45 "	1·48 "
P	Solar diurnal.....	0·62 "	0·80 "	0·80 "

In following the onward progress of the tide, it is thus necessary to take the Victoria tide as the type for the Strait of Fuca, while Port Townsend is probably typical of the Puget Sound region. The tide is then further modified in its passage through a network of narrow channels, in reaching the Strait of Georgia. In these circumstances, constant differences in time do not hold, as they usually do when a tide progresses evenly along a channel or strait. The only way to meet the difficulty is to secure tidal data for the Strait of Georgia itself, as has now been done.

With the tide tables now issued, tidal differences are given which enable the time of the tide to be found approximately for Esquimalt, Vancouver, New Westminster and Nanaimo. An explanation is given in the tide tables themselves, of the data on which these differences are based.



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*Quebec, Halifax and St. John, N.B.*—The tide tables for these principal harbours remain, up to 1901, without further improvement in their accuracy; being still based upon the same length of tidal record as before. These tables give the time and height of the tide, the depth of the water on dock sills, &c.; and they are accompanied by tidal differences, by which the time of the tide at a large number of other ports becomes known. The chief improvement in this set of tables, is the addition of the tidal differences for the Bay of Fundy, as above explained.

These tide tables were again supplied to the leading British and Canadian Almanacs, for 1900, as far as they were willing to publish them. Some improvements in this respect may be noted. In McMillan's Almanac, the St. John tables for 1900 are printed in full, the height of the tide as well as the time being given, which is important in a harbour where the range of the tide is over thirty feet. The newspapers have also done a little better on the whole, in making the tide tables known. The St. John papers have not published them as fully as in former years; but on the other hand, in Quebec, the *Chronicle* and the *Soleil* have published the tide tables for that harbour pretty regularly throughout the season, giving two or three days at a time; and have made acknowledgement to this Department for them. The *Quebec Telegraph* also gave occasionally the tides for the following day.

The almanacs in which the tide tables appear in whole or in part are as follows:—  
 Canadian Almanac.—All the above, in full.—The Copp, Clark Co., Toronto.  
 Greenwood's Almanac.—“ “ —Capt. W. N. Greenwood, Lancaster, Eng.  
 Brown's Almanac.—Halifax tide tables.—Messrs. J. Brown & Son, Glasgow and L'pool.  
 Belcher's Almanac.—Halifax tide tables.—The McAlpine Publishing Co., Halifax.  
 McMillan's Almanac.—St. John tide tables in full.—M'rs. J. & A. McMillan, St. John.  
 Cogswell's Almanac.—(Discontinued. Did not appear for 1900.)  
 Moore's Tide Tables.—Quebec; time only.—Messrs. T. J. Moore & Co., Quebec.

These tide tables were again reprinted from Greenwood's Almanac; the reprints including the tables for St. Paul island also, with tidal differences for the south-west coast of the Gulf of St. Lawrence. Of these, nearly 500 copies were widely distributed. In this way all applications for the tables have been met; forty-nine copies having been sent in reply to requests for them. The number of these reprinted copies ordered for 1901 has been increased to 600.

*Charlottetown, Pictou and St. Paul Island.*—These tide tables are computed by this Survey and printed by the Department. A step in advance has been made, in preparing them earlier in the year, and also in extending them to include the whole year, instead of only eight months as formerly. To do this, it was of course necessary to compute two sets of tables during the one year; and to facilitate the extra work, a tidal-difference machine was devised by me, by which variable differences in the time of the tide can be run off with the same facility as a constant difference. The series of differences used in the successive computation of this set of tables, from the principal tidal station at St. Paul island, was also revised and slightly modified. (For explanation of the method used, see Report of Tidal Survey, December, 1898, pages 8 and 9.)

The extension of these tables to include the whole year, will be of service to the winter navigation in Northumberland strait. Also, by preparing them early in the year, the almanacs were supplied with copies for 1901 in good time, and it is thus hoped that they will be induced to publish them. It would be an important improvement if they would publish the tide tables prepared by this Survey; because any other tide tables, as formerly published for Charlottetown and Pictou, have been quite incorrect; or the tidal difference given by which to compute them, has been misleading. The reasons for this, which are attributable to the character of the tides, have been explained in Reports of Tidal Survey, December 1898, page 7; and December, 1899, page 11; where examples are given in illustration. It was chiefly in the hope of replacing this inaccurate information with reliable tide tables that the effort was made to issue them in the spring, amongst the press of other preparations in leaving for the work of the summer season.

Already, during 1900, the Charlottetown *Patriot* has published the tide tables of this Survey, one month at a time, with the full explanation accompanying them. The *Examiner* has also given them correctly for the later months of the year. At Summer



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side, P.E.I., the *Journal* was found to be publishing tables for that harbour which were inaccurate; and the tide tables of this Survey, with the correct difference in time from Charlottetown, were therefore sent to it. The Pictou and New Glasgow papers have also been supplied with this set of tide tables: which the Pictou *Advocate* and the New Glasgow *Enterprise* published when they were first issued in 1897 and 1898.

*Ste. Croix Bar.*—Tide tables were again computed for this locality, as it is still the shallowest point in the Ship channel between Quebec and Montreal; and the difference in time for St. Augustin Bar is also given. An improvement in the accuracy of these tables has been secured, by working up the observations recorded by the semaphore operator at Cap Santé, opposite Ste. Croix Bar. The additional record thus utilized, extended from June 9 to November 26 in 1898.

These tide tables are published in company with the tide tables for Quebec, by the Montreal Harbour Commissioners; in the publication they prepare annually for the information of the St. Lawrence pilots.

*Father Point.*—Prepared in manuscript only; and posted at the lighthouse at Father Point. As this is the Pilot Station for the Lower St. Lawrence, they are there accessible to the pilots.

*Tadousac, Cacouna and Little Metis.*—Tide tables for the months of July, August and September were computed for these sea-side resorts to meet the demand of the summer residents and tourists. This was done by a little extra work, without expense; as the tide tables were prepared in manuscript only, and posted at the leading hotels.

#### TIDE TABLES FOR 1902.

These are now in hand for calculation, and will be ready in the early part of next year. An improvement in the accuracy of the tide tables for Quebec will be secured; as the basis from which they are calculated will be extended from two to four years of observations, by the analysis of two additional years of tidal record; namely, from February 1, 1896, to February 28, 1898.

Similarly, the accuracy of the St. Paul Island tide tables will be improved by extending their basis from one to two years, by the analysis of one year of additional record; namely, from December 12, 1897, to December 31, 1898. On St. Paul island, the tide tables for Pictou and Charlottetown in Northumberland strait, are dependent; as well as the south-west coast of the Gulf of St. Lawrence and the north shore of Prince Edward Island, for which tidal differences from St. Paul island are given.

The tide tables for St. John and Halifax will remain on the same basis; and also those for British Columbia for 1902, which will be calculated from the same record that serves as the basis of the tide tables now prepared for 1901.

#### THE CURRENTS.

*Currents in the Gulf of St. Lawrence, including the Anticosti region, and Belle Isle and Cabot Straits.*—A pamphlet with this title was prepared, and published by order of the Minister in June last. The information it contains is derived from the investigations in the Gulf of St. Lawrence made by this Survey during the summer months of 1894, 1895 and 1896; supplemented by information collected by myself from captains of vessels, fishermen and others, having a long experience in the Gulf. For greater clearness, no reference is made to the methods and appliances employed in these investigations; although some of them were used for the first time at sea, or were devised to meet the special conditions in the Gulf.

In condensing this information from the Reports of Progress already issued by this Survey, a division of the subject into two parts was made, as follows:—Part I. Description of the currents on the surface, as a mariner may expect to find them in each locality. Part II. The causes, as far as ascertained, which influence the currents in moving as they do; and the general circulation of the water in the Gulf of St. Lawrence.

This second part is also of value to mariners, in showing the usual direction in which the water tends to move, when undisturbed. It is added for the benefit of those who



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may desire to obtain some intelligent grasp of the conditions in the Gulf area, and the causes which influence the currents in moving as they are found to do; and who may wish to know something of the general relation of the waters in the Gulf area to the St. Lawrence river and the ocean; on which the work of this Survey has thrown considerable light.

This pamphlet was widely distributed, being sent to all those who usually receive "Notices to Mariners" for the Atlantic coast of Canada; as well as to the foreign consuls, harbour boards, corporations of pilots, port-wardens, &c.; and to thirty-six shipping firms and agents of steamship lines. Several appreciative letters were received in reply from these firms; and the following additional copies were sent on request, which were desired chiefly for distribution to the captains of vessels:—

	Copies.
The High Commissioner for Canada, London, England.....	50
The Imperial German Consulate.....	4
The Consul for Sweden and Norway, for the captains of Norwegian vessels.....	36
Messrs. H. & A. Allan, Allan Line, Montreal.....	25
Messrs. D. Torrance & Co., Dominion Line, Montreal.....	8
Messrs. Elder Dempster & Co.....	20
The Robert Reford Co., Donaldson and Thomson Lines.....	36
Messrs. McLean, Kennedy & Co., Ulster S.S. Co.....	24
The Hamburg-American Line.....	20
Messrs. Carbray, Routh & Co., Dene Line.....	12
The Quebec Steamship Co.....	5
Messrs. Furness, Withy & Co., Furness Line, Halifax.....	6
Messrs. Pickford & Black, Halifax and W. I. Lines.....	6
The Newfoundland Railway and Steamship Co., St. John's,	12

*Note on Chart of the Gulf of St. Lawrence.*—On the latest editions of the general chart of the Gulf, Admiralty chart No. 2516, the following note appears with respect to the currents, which embodies an outline of the results arrived at, in the investigations made by this Survey:—

"In the Strait of Belle Isle the currents are principally tidal, the west-going stream predominating; but wind has a great influence both in direction and force. Cross currents here appear to be rare.

"In Cabot strait the currents, although influenced by winds and tides, usually set to the north-westward round Cape Ray on the Newfoundland side, and to the southward on the Cape Breton side, this last current sometimes extending nearly across the whole width of the strait.

"On the main steamship route between the Strait of Belle Isle and Anticosti, and over most of the open area of the Gulf of St. Lawrence, the current is very variable, its rate seldom exceeding one knot per hour; and its direction, apparently, principally governed by winds. Its uncertainty renders it necessary for the mariner to exercise much caution.

"The only currents in the Gulf which run with any constancy, in the season of navigation, are:—A north-easterly set, of less than one knot per hour, off the west coast of Newfoundland, between Bonne Bay and Rich Point, and the easterly current between the entrance of the river St. Lawrence and the west end of Anticosti, turning to the southward round Cape Gaspé; but these currents are retarded, and may even be reversed, by strong contrary winds."

*Tidal currents of the Lower St. Lawrence.*—Some relations between the turn of the current and the time of high and low water, have been ascertained while the surveys for the Admiralty charts were being made. But unfortunately the time of the tide itself has not been known with sufficient accuracy to make these relations with the current practically available to mariners. The tidal observations of the present season will afford the information required, and will thus enable the turn of the current to be readily computed also.



The relations referred to, as noted on the St. Lawrence charts, when put in tabular form, are as follows :—

Tidal Streams in the offing of Localities given.	Flood Stream begins after L. W.		Ebb Stream begins after H. W.		Duration of Flood Stream.		Duration of Ebb Stream.	
	H.	M.	H.	M.	H.	M.	H.	M.
After low water and high water by the shore—								
Quebec .....	1	10	1	05	5	00	7	30
Ste. Anne de Beaupré.....	0	45	1	00	5	10	7	15
St. Laurent, Orleans Island.....	0	55	1	10	5	00	7	25
Berthier .....	1	10	1	05	5	05	7	20
Grosse Isle.....	1	00	1	05	5	10	7	10
L'Islet.....	0	30	0	30	5	30	6	50
After low water and high water at Orignaux Point—								
In Upper Traverse..	2	05	1	30	5	25	7	00
In Lower Traverse.....	1	55	1	45	5	45	6	45
Orignaux Point...	0	30	1	10	5	55	6	30
After low water and high water at Rivière du Loup—								
In Brandy Pot Channel ...	1	05	0	50	6	05	6	20
Green Island.....					6	00	6	24
Tadoussac.....					6	08	6	15
Bic Island.....					5	50	6	34
Port Neuf (north shore, opposite Bic).....					6	07	6	18

Current observations on the St. Lawrence in 1900.—With the object of obtaining further simultaneous comparisons where the currents are strongest, arrangements were made this season for observation of the turn of the current at L'Islet, and in the Upper and Lower Traverse. The current there attains a speed of 7½ knots during spring tides. The pier recently placed at the edge of the channel in the Upper Traverse, was made use of for these observations ; and in the Lower Traverse, two miles below, the swing of the light-ship enabled the turn of the current to be noted at both day and night tides. The observers were instructed to take the corresponding moment in the turn of the current at both places. They also noted the swing of the buoys on the opposite side of the channel, so that the turn of the current in mid-channel might be correctly deduced from the double observations.

The chief essential was to obtain correct time for these observations. The observer on the Traverse Pier was provided with a chronometer, and he gave a time signal to the light-ship by lowering a flag at the moment of nine o'clock ; as at that hour the direction of the sunlight is the most favourable for seeing the signal from it. To simplify matters for the observer, the face reading of the chronometer was taken without correction throughout the season ; and its error was ascertained by time comparisons made at two different dates when the locality was visited by myself or my assistant. The total accumulated error amounted only to 2½ minutes, at the close of the season, which is hardly appreciable in observations of this character, but has nevertheless been allowed for.

The observations of the turn of the current which were secured at the three localities, extended over the following periods :—

- L'Islet.....Observer, R. Pelletier...May 14 to October 1, 1900.
- Upper Traverse... Observer, A. Fournier... May 16 to September 15.
- Lower Traverse...Observer, E. Lebel.....May 16 to September 15.

These observations, when brought into relation with the time of high and low water as ascertained by the tidal observations of this season, will evidently afford information of permanent value regarding the turn of the current.



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## TIDAL OBSERVATIONS IN THE SUMMER SEASON OF 1900.

*Summer stations on the Lower St. Lawrence below Quebec.*—The two permanent tidal stations in the St. Lawrence region, are at Quebec itself, and at Father Point, 180 miles below ; and the chief object of the observations at other places in this region, is to obtain 'tidal differences' by which the time of the tide may be correctly computed for them. The information which exists with respect to the turn of the strong tidal currents of the Lower St. Lawrence, will become practically available when once the time of the tide itself can be definitely computed. This has been explained above where the currents are referred to.

The difference in the time of high water and low water, between Father Point and Quebec, has now been determined from two complete years of simultaneous record. The average values which result for the whole period are as follows, in absolute time :—

4<sup>h</sup> 20<sup>m</sup> for the difference of the time of High Water.  
5<sup>h</sup> 29<sup>m</sup>        "        "        "        Low Water.

The time taken by individual tides in running up the estuary from Father Point to Quebec, varies appreciably from these mean values, during the course of the month. It appears probable that this variation occurs chiefly in the upper part of the run of the tide, towards Quebec. Father Point is in the middle of the open estuary, at only seven miles from the 100-fathom line in the offing ; while Quebec is in reality in the river, above the true head of the estuary, which must properly be considered as being below Orleans island. It is there also that the tide has its maximum range ; which corroborates this view.

An effort was accordingly made to erect as early as possible in the season the tide gauges at Grosse Isle and L'Islet, below Orleans island. A better and longer series of comparisons with Quebec was thus obtained, especially as the early months of May and June are less disturbed by storms than the later months of autumn. It is hoped that these comparisons will enable the greater part of the variation between Father Point and Quebec to be accounted for, when the observations are worked out.

Other work then made it necessary for me to return to Ottawa ; especially the arrangements required in order to close the financial year. The gauge at Orignaux Point was next established, as soon as the hotel there was opened for the summer season. The manager of the hotel acted as tidal observer ; as none of the few residents at the Point was capable of taking the necessary observations. Gauges were next erected at Rivière du Loup Point, and at Tadousac. In the choice of these tidal stations, the first consideration was given to points at which relations to the tidal currents had already been obtained, as above mentioned.

The permanent station at Father Point comes next in order ; and below that, it was important to establish a tidal station in a position to command the mouth of the estuary at its narrowest part, in the vicinity of Point de Monts. This must properly be considered as the dividing line between the estuary and the Gulf of St. Lawrence, the length of the true estuary from the lower end of Orleans island to Point de Monts being 230 miles.

After considerable inquiry, the best position available in this vicinity, where the advantage of a wharf could be had, was found to be at Cape Chatte River. A steamer calls fortnightly in this offing ; but to save time it was found best to go overland 80 miles from Little Metis on the Intercolonial railway. This last tidal station was in working order by July 17, when the whole series of eight stations gave simultaneous returns. The observations were continued till the middle of October, with the exception of Tadousac and Orignaux Point, where difficulties arose which made it necessary to close the stations a month earlier.



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The whole series of stations, with the length of tidal record secured at each, and the names of the observers, are as follows :—

Quebec . . . . .	Permanent tidal station . . .	Continuous record.
Grosse Isle . . . . .	Captain C. Langlois . . . . .	May 4 to Oct. 15
L'Islet . . . . .	Réal Pelletier . . . . .	" 12 to " 15
Orignaux Point . . . . .	T. Grindrod . . . . .	June 22 to Sept. 11
Rivière du Loup . . . . .	M. McCarthy . . . . .	" 30 to Oct. 17
Tadousac . . . . .	L. N. Catellier . . . . .	July 6 to Sept. 15
Father Point . . . . .	Permanent tidal station . .	Continuous record.
Cape Chatte . . . . .	J. S. Russell . . . . .	July 17 to Oct. 1

*Equipment of the Tidal Stations.*—All the stations were provided with self-registering gauges of the Richard type. The gauges were fitted with a pulley-wheel of special diameter, to adapt the scale to the height of the tide in this region, and bring it within the range of the instrument. The total range thus provided for, was 24 feet ; and diagrams with corresponding graduations were specially printed. The accuracy of the scale was checked by a direct test before the instruments were used.

The gauge was actuated by a float, six inches in diameter, which rose and fell with the tide within a column of planking, of which the inside dimensions were 10 inches by 14 inches. This gave room enough for the protection of the counterweight, on a line with the off-side of the pulley-wheel of the instrument. The column was built in 12-foot lengths, and set against the side of a wharf, in a truly vertical position. The necessity for its being vertical, usually made substantial bracing necessary ; as the batter of the side of the wharf gave the column an off-set of two or three feet at the upper end. It was often difficult to find a position where the column would not be struck by vessels using the wharf ; and at the same time to place it far enough out towards the head of the wharf, to secure a sufficient depth of water. Special care was given to the design of the inlet which admitted the water at the bottom of the column, and to such other details as would prevent wave-motion within the column, which has always proved so troublesome in rough weather. The means adopted to this end were eminently successful, the details often requiring adaptation to local conditions ; but they need not here be described at length.

*Correct time for the observations.*—It is very evident that correct time for these observations was essential, when one of the primary objects was to obtain time-differences with relation to the tide. Where there is any uncertainty in the accuracy of the time used, the tidal record itself becomes valueless for its chief purpose. In the extensive series of simultaneous observations in the Bay of Fundy, there was practically more loss of record from this cause, than from interruptions through damage by storms or in any other way. This experience emphasised the need of making effective provision to secure correct time.

It might seem at first sight, that no special arrangements to secure correct time would be needed in this region. On the Intercolonial Railway, running parallel to the south shore of the estuary, a time signal is transmitted every day at the moment of noon ; and there is also a telegraph line along each shore. Practically however, the tidal gauges nearest to the railway, were at four to six miles distant from the railway stations ; and some were on islands or in isolated positions. The expense of hiring conveyances to take advantage of the railway signals, would therefore be considerable ; as time comparisons would be required at least twice a week during the season. It was therefore found best to supply most of the tidal stations with chronometers. With one already belonging to this Survey, five additional ones were found sufficient. They were carefully rated in advance ; and if the rate was at all large, the observer was given a table of corrections to apply to the face reading during the season. Their rate was also checked during the season, by exchange of time by telegraph with the observatory at Quebec, which the meteorological observer, M. Arthur Smith, kindly undertook to transmit whenever desired. A watch of high grade, running at a steady rate, was also used to carry the time from place to place, when the stations were visited for inspection during the season. These were the arrangements adopted in general, with modifications adapting them to local circumstances, which need not be detailed.



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To this use of chronometers, the success of the season's work is largely due; and no part of the tidal record had to be rejected as unreliable through uncertainty in the time. The time used throughout, was Eastern Standard, for the 75th meridian. All the time-differences between stations are thus in absolute time.

*Supervision.*—The instructions drawn up for the observers, provided for observations of such a character as to secure an independent check on the working of the recording instrument. The correct setting of the instrument at the time, can thus be verified afterwards in the office. A further advantage as regards supervision, was secured by making Rivière du Loup headquarters for the season. It is situated in the middle of the region; and being a divisional point on the railway, the trains in both directions are convenient; and the river steamers also call at the wharf. The tidal returns were sent there; and any want of accuracy could be detected at the time, or a station could readily be visited if trouble occurred. The full advantage of this arrangement was not obtained however; as it was necessary for me to leave for a month in the middle of the season to visit one of the principal tidal stations at Forteau bay in Belle Isle strait. Mr. Hayden, who had assisted me in the erection of the tidal gauges, was left in charge at Rivière du Loup during my absence. We were also both absent for a week in August, while taking the special observations at Father Point, already referred to; which it was convenient to secure while in this region.

*Results.*—When the observations now secured are fully worked out, there will result in the first place, trustworthy tidal differences by which the time of the tide along the Lower St. Lawrence will be correctly known. This will then enable the time of the turn of the strong tidal currents to be determined also, as already explained; and it is in this that the chief value of the work to navigation, will consist.

The tide-levels, which have to be worked out in the reduction of the observations, will also be of practical service. These levels, have been referred to the original Admiralty bench marks; a list of those on the Lower St. Lawrence being kindly furnished by the Hydrographer to the Admiralty. The primary importance of these bench marks is very evident; as the low water datum of the charts is thus permanently recorded. The tide-scales of the gauges erected this season, were connected with the bench marks by means of instrumental levels; and the tidal observations themselves, are thus brought into direct relation with the chart soundings, the depth on shoals, &c. The points at which the bench marks have thus been made use of, are at Quebec, Grosse Isle, L'Islet, Orignaux Point, and Rivière du Loup; as well as the Tidal Survey bench mark at Father Point.

The total cost of the summer observations from May to October, including the salaries of observers, was \$1,241.06. This comprises six tidal stations for periods varying from three to five months, and three stations at which observations of the current were obtained. The average cost of each of the six tidal stations, including its erection, the salary of the observer, the cost of obtaining correct time, and travelling expenses, was \$192.00. This amount does not include the salary of the Engineer in charge, or of his assistant, during the time the work was in progress.

I have, sir, the honour to remain,  
Your obedient servant,

W. BELL DAWSON,  
*In charge of Tidal Survey.*







## PART II

STATEMENT OF EXPENDITURE—STATEMENT OF REVENUE—METEOR-  
OLOGICAL SERVICE—MAGNETIC OBSERVATORIES—SIGNAL  
SERVICE—BOARD OF EXAMINERS OF MASTERS AND  
MATES—LIVE STOCK SHIPMENTS—STATEMENT OF  
WHARFS—LIFE-BOAT STATIONS—STATEMENT  
OF SICK MARINERS DUES—REWARD FOR  
HUMANE SERVICE—STEAMBOAT IN-  
SPECTION—LIST OF LIGHT-  
KEEPERS AND LIGHT  
STATIONS.







APPENDIX No. I

GENERAL SUMMARY of Expenditure for Fiscal Year ended June 30, 1900.

Service.	Amount.	Total.
	\$ cts.	\$ cts.
Ocean and River—		
Maintenance and repairs to Dominion steamers.....	180,430 65	
Construction of steamer "Minto" (balance).....	41,951 88	
Examination of masters and mates.....	3,750 69	
Rewards for saving life, &c.....	7,007 97	
Investigations into wrecks.....	773 06	
Registry of shipping.....	266 43	
Tidal service.....	4,372 18	
Removal of obstructions in navigable rivers.....	252 19	
Winter mail service.....	1,503 70	
Marine biological station.....	739 61	
Export cattle trade.....	2,762 24	
Unforeseen expenses.....	3,452 21	
		247,262 81
Lighthouse and Coast—		
Salaries and allowances of lightkeepers.....	210,199 61	
Agencies, rents and contingencies.....	16,959 08	
Maintenance and repairs to lighthouses.....	229,095 79	
Construction of lighthouses.....	60,239 92	
Signal service.....	5,906 83	
Repairs to wharfs.....	697 87	
		523,099 10
Scientific Institutions—		
Observatory, Toronto.....	2,707 81	
Meteorological service.....	67,692 42	
Hydrographic survey.....	12,600 98	
		83,001 21
Marine Hospitals—		
Treatment of sick and disabled seamen.....	36,005 04	
Shipwrecked and distressed seamen.....	1,738 26	
		37,743 30
Steamboat inspection.....		27,965 72
Parliamentary returns.....		158 52
Civil government salaries.....	54,368 71	
" " contingencies.....	8,962 60	
		63,331 31
Total marine.....		982,561 97
FISHERIES.		
Salaries and disbursements of fisheries overseers.....	85,151 45	
Fish breeding.....	38,070 12	
Fisheries protection service.....	97,370 11	
Fishing bounty.....	160,000 00	
Miscellaneous.....	30,386 06	
		410,981 29
Total marine amd fisheries.....		1,303,543 26

A. W. OWEN,  
Accountant.

F. GOURDEAU,  
Deputy Minister of Marine and Fisheries



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## APPENDIX No. 2.

STATEMENT of Revenue of Marine and Fisheries Department for Fiscal Year ended  
June 30, 1900.

Service.		Refunds.	Amount.
	\$ cts.	\$ cts.	\$ cts.
Harbours, piers and wharfs.....	9,071 34	31 50	9,039 84
Dominion steamers.....			13,467 76
Examinations, masters and mates .....			4,221 50
Fines and forfeitures.....	226 00	100 00	126 00
Cattle inspection .....	2,000 25	52 69	1,947 56
Steamboat inspection fund.....	36,474 83	2,861 78	33,613 05
"    engineers' certificates.....			809 00
"    inspection of barges .....			200 00
Sick mariners' fund.....	59,984 12	12 28	59,971 84
Marine registry searches.....			56 80
Signal station service.....			905 00
Shipping forms.....			116 49
Casual revenue, sundries.....	5,759 60	5 92	5,753 68
FISHERIES.			130,228 52
Ontario.....			794 12
Quebec.....			2,543 04
Nova Scotia.....	5,494 49	10 00	5,484 49
New Brunswick.....	12,015 27	0 90	12,014 37
Prince Edward Island .....			2,207 12
Manitoba.....			2,028 00
North-west Territories.....			1,522 50
British Columbia.....			53,195 35
Licenses to United States fishing vessels. ....			79,788 99
			8,617 60
			88,406 59

## RECAPITULATION.

Marine revenue.....	\$130,228 52
Fisheries revenue.....	88,406 59
	<u>\$218,635 11</u>

A. W. OWEN,  
Accountant.

F. GOURDEAU,  
Deputy Minister of Marine and Fisheries.



APPENDIX No. 3.

STATEMENT of Steamboat Inspection Dues collected during the Fiscal Year ended June 30, 1900.

	Amount.		Amount.
	\$ cts.		\$ cts.
<i>Ontario.</i>			
Amherstburg.....	42 80	St. Stephen.....	118 16
Belleville .....	47 08		
Brookville .....	145 24	<i>Nova Scotia.</i>	2,027 88
Collingwood .....	1,165 00		
Cornwall.....	154 52	Amherst.....	30 84
Deseronto.....	165 12	Annapolis.....	7 56
Fort Erie.....	204 16	Arichat .....	10 28
Goderich.....	248 96	Barrington .....	11 92
Hamilton.....	288 82	Canso. ....	28 56
Kingston .....	1,743 60	Halifax.....	2,858 48
Lindsay. ....	171 04	Kentville .....	486 72
Morrisburg .....	137 88	Liverpool. ....	33 80
Napanee.....	20 68	Lamenburg .....	28 64
Ottawa.....	871 24	North Sydney.....	254 00
Owen Sound.....	1,180 37	Pictou .....	107 44
Peterboro' .....	155 52	Port Hawkesbury.....	54 52
Picton.....	206 48	Sydney.....	98 84
Port Arthur .....	519 16	Weymouth.....	16 48
Prescott .....	405 88	Windsor.....	41 12
St. Catharines.....	286 60	Yarmouth .....	390 02
St. Thomas.....	297 76		
Sarnia .....	775 44	<i>Manitoba.</i>	4,459 22
Sault Ste. Marie .....	466 96		
Simcoe.....	35 40	Winnipeg.....	284 08
Stratford .....	105 36		
Toronto.....	2,074 30	<i>British Columbia.</i>	
Wallaceburg .....	94 04		
Windsor.....	1,679 91	Kaslo.....	30 68
		Nanaimo.. ..	48 86
<i>Quebec.</i>	13,689 32	Nelson.....	864 40
		New Westminster.....	525 32
Cookshire .....	19 16	Vancouver .....	974 72
Montreal .....	4,234 52	Victoria .....	3,744 20
Quebec .....	1,571 52		
St. Hyacinthe.....	6 04	<i>Prince Edward Island.</i>	6,188 18
St. Johns.....	23 72		
Sorel .....	121 84	Charlottetown.....	317 88
Stanstead.....	11 15	Summerside .....	7 64
Three Rivers.....	31 28		
		<i>North-west Territories.</i>	325 52
<i>New Brunswick.</i>	6,019 23		
		Calgary.. ..	17 32
Bathurst.....	20 64	Dawson.....	3,464 08
Chatham.....	179 20		
Dalhousie.....	150 40		3,481 40
Fredericton .....	52 68		
Moncton.....	7 00	Total .....	36,474 83
Newcastle.....	67 84	Less refunds.....	2,861 78
Sackville.....	7 00		
St. John.....	1,424 96	Grand total.....	33,613 05



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## APPENDIX No. 4.

## METEOROLOGICAL SERVICE.

METEOROLOGICAL OFFICE,  
TORONTO, November 8, 1900.

Major F. GOURDEAU,  
Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit the twenty-ninth annual report of the Meteorological Service of Canada, this report being for the fiscal year July 1, 1899, to June 30, 1900, with Appendices A. and B, reports of the Quebec and St. John observatories.

The number of persons in receipt of pay from the Meteorological Service on June 30, for various duties performed in connection therewith was 163. Of this number twenty are employed in the central office, and with a few others at outside stations devote their whole time to the work; others are occupied in observing during only a short period of each day, and a third portion is employed only to attend to the display of storm signals when notified. To the number thus employed must be added 255 voluntary observers scattered throughout the various provinces, who make regular meteorological returns to the central office without remuneration. Without the assistance of these latter observers it would be impossible to study properly the climatic conditions of this country, and it is with much pleasure that I again record my acknowledgment of their valuable co-operation.

Since issue of my last annual report the following stations have been opened :—

## BRITISH COLUMBIA.

- Class III.—Vancouver, J. T. Brown.
- “ II.—Rossland, F. C. Moffat.
- “ III.—Naas Harbour, C. B. Deaville.
- “ III.—Port Essington, D. Jennings.

## NORTH-WEST TERRITORIES.

- Class II.—Moosomin, Marshall Smith.
- “ II.—Athabasca Landing, Richard Cox.
- “ III.—Regina, J. R. C. Honeyman.
- “ II.—Crane Lake, D. N. Andrews.
- “ III.—Beaver Hills, Wilhelm Honne.
- “ III.—Crescent Lake, Frank Baines.

## ONTARIO.

- Class II.—Sturgeon Falls, Vaughan Roberts.
- “ III.—N. Williamsburg, D. L. Collinson.
- “ II.—Rat Portage, L. C. Charlesworth.
- “ II.—Dunnville, M. R. Reid.



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## QUEBEC.

Class II.—Ste. Agathe des Monts, The Superintendent, Sanitorium.  
 “ I.—Ste. Anne de la Pocatière, Prof. L. M. Destroismaisons.

## NEW BRUNSWICK.

Class I.—Bathurst, J. C. Meahan, M.D. (resumed).

The following stations in different provinces have ceased to be operative from various reasons:—British Columbia—Abbotsford, Clinton, Saltspring Island, Atlin. North-west Territories—Duck Lake. Manitoba—Foxton, Pilot Mound. Ontario—Galt, Roy Mines, Niagara, Port Rowan. Nova Scotia—Bridgetown. P. E. Island—Port Hill.

The only change in the staff of the Central Office was the appointment of Mr. Frank O'Donnell to a clerkship in the place of Mr. J. F. Carroll, deceased. The publication of monthly weather reviews and monthly and daily charts has been continued with regularity, but I regret to report that practically no progress is being made in bringing the annual climatological reports up to date. This may probably be due to pressure of work in the Department of Printing. The manuscript of two of these reports, namely, those for 1898 and 1899, is ready for the printer, and I shall like to see better progress made.

## STORM WARNINGS AND DAILY FORECASTS.

There are now in the Dominion 69 storm signal display stations, 36 of which are in the Maritime Provinces, 31 on the lakes and 2 in British Columbia and throughout the year warnings of approaching storms have, when it has been deemed necessary, been despatched to these stations and signals have been duly displayed.

There cannot be any doubt but that the storm signals are the means of saving much life and property; during the Autumn many vessel masters never leave port without consulting the Meteorological Office and repeated assurance has been given that shipping people generally consider the meteorological warnings of great value. The *St. John Globe* on 28th February last, speaking of the unusually stormy weather of the month just closing says editorially ‘The gales of the month were severe and of frequent occurrence, but were not attended by disaster to shipping on our coast. The good work of the Canadian Meteorological Service in giving timely warning of these storms is highly commendable. Not only have the Toronto forecasts—which are published every evening in the *Globe*—been very accurate, but the value of the service rendered mariners in giving warning of these storms would be difficult to estimate.’ Regular forecasts have as heretofore been issued twice daily and distributed widely in all parts of the Dominion reached by telegraph. The morning forecasts issued from Toronto at 10 o'clock and covering the current and following day is telegraphed to all the more important ports and is posted at one or more points where it may be seen by fishermen and shipping people generally; it is moreover published in the majority of the afternoon papers.

For several years special information and forecasts have been telegraphed to Halifax and St. John, and during the past year there has been a much increased circulation of these bulletins, and now nearly all public buildings, shipping offices, hotels, &c., are supplied with a copy. It is proposed within the next few weeks to inaugurate the same system of special information in Quebec, Montreal, Ottawa, Hamilton and London. In Toronto 80 copies of the morning chart are printed each day at the central office and these are distributed widely in the city and some few copies are forwarded by mail to neighbouring towns.

The second forecast issued at 10 p. m. is disseminated very widely by the various telegraph companies and is supposed to be posted up at every telegraph office in the



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Dominion, and is printed generally in a conspicuous place in nearly all the daily morning journals.

It was decided to discontinue the train signals this year as it has been doubtful whether several factors do not tend to make their value insufficient to warrant the expenditure involved.

The British Columbia forecasts have as during the preceding year been issued from Victoria, and it is hoped notwithstanding the difficulties peculiar to a western coast line, to be contended against, that fair progress has been made and that the Service is growing in popularity.

In August last the Meteorological Service took possession of three rooms in the upper story of the Government Building, Victoria, and the accommodation has proved to be admirably adapted for the work to be performed. In addition to the offices, the service has been permitted to place thermometers, rain gauge, and storm signal mast on the flat roof of the building—a most desirable arrangement and one also very convenient, as the morning observations are taken at 4.45 o'clock to synchronize with the 7.45 o'clock observations of the Eastern United States and Canada. A special endeavour has been made in this as in other years to warn the various railroads of approaching snow storms, and shippers of perishable goods of expected cold waves, and doubtless very large losses have been prevented by discreet attention to warnings received

TABLE I.—THE following table shows the total number of warnings issued and the percentage verified.

Years.	Number Issued.	Number Verified.	Percentage Verified.
1877.....	743	510	68·6
1878.....	860	673	78·3
1879.....	712	591	83·0
1880.....	889	736	82·8
1881.....	854	727	85·1
1882.....	841	658	78·2
1883.....	1,085	858	79·1
1884.....	798	663	83·2
1885.....	830	741	89·3
1886.....	906	799	88·2
1887.....	1,093	972	88·9
1888.....	897	758	84·5
1889.....	1,126	926	81·3
1890.....	1,199	987	82·3
1891.....	1,017	826	81·2
1892.....	1,161	888	80·7
1893.....	1,317	1,118	84·9
1894.....	1,333	1,149	86·2
1895.....	1,307	1,168	89·4
1896.....	1,181	1,015	85·9
1897.....	1,368	1,248	91·2
1898.....	1,230	1,039	84·5
1899.....	1,127	913	81·1
1900 six months, January 1 to June 30.....	255	233	91·4



TABLE II.—METEOROLOGICAL SERVICE—Number of forecasts and percentage of fulfilment in each district, in each month and in the year July, 1899, to June, 1900, inclusive.

MONTH.	MANITOBA.				LAKE SUPERIOR.				GEORGIAN BAY.				LOWER LAKE REGION.				OTTAWA VALLEY.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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	Number fully.	Number partly.	Number not.		Percentage.	Number fully.	Number partly.		Number not.	Percentage.	Number fully.		Number partly.	Number not.	Percentage.		Number fully.	Number partly.	Number not.	Percentage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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TABLE II.—METEOROLOGICAL SERVICE.—Number of forecasts and percentage of fulfilment in each district, in each month, and in the year July, 1899, to June, 1900, inclusive—Continued.

Month.	UPPER ST. LAWRENCE VALLEY.				LOWER ST. LAWRENCE VALLEY.				GULF.				MARITIME.				TOTAL.			
	Verified.				Verified.				Verified.				Verified.				Verified.			
	Number fully.				Number fully.				Number fully.				Number fully.				Number fully.			
	Number of Forecasts.	Number partly.	Number not.	Percentage.	Number of Forecasts.	Number partly.	Number not.	Percentage.	Number of Forecasts.	Number partly.	Number not.	Percentage.	Number of Forecasts.	Number partly.	Number not.	Percentage.	Number of Forecasts.	Number partly.	Number not.	Percentage.
1899.																				
July.....	102	75	19	8	82.8	97	70	15	12	80.0	98	72	22	4	84.7	105	77	23	9	84.3
August.....	105	93	6	4	93.3	112	102	7	3	94.2	120	106	12	2	93.3	120	102	17	1	92.0
September.....	103	75	18	10	81.6	99	76	15	8	84.3	105	79	15	11	82.4	112	78	21	13	79.0
October.....	102	74	21	7	82.8	104	67	25	12	76.4	99	65	21	13	76.3	105	71	16	18	75.2
November.....	90	73	4	13	83.3	96	73	18	5	85.4	113	93	15	5	88.9	112	93	15	4	89.7
December.....	104	67	24	9	77.9	103	71	21	11	79.1	109	79	18	12	80.3	118	62	38	18	68.6
1900.																				
January.....	90	75	18	6	84.8	93	76	12	6	87.6	100	84	9	7	88.5	131	102	19	10	85.1
February.....	87	70	13	5	86.9	90	73	10	7	85.6	88	71	11	6	86.6	90	69	10	11	82.2
March.....	116	92	15	9	85.8	112	91	11	7	82.8	109	80	20	9	82.6	118	99	10	9	88.1
April.....	80	63	4	7	88.7	86	71	6	9	86.0	105	72	15	18	75.7	113	73	16	24	71.7
May.....	96	76	8	12	83.3	109	86	9	14	83.0	111	90	10	11	85.6	112	85	17	10	83.5
June.....	95	73	11	1	93.1	97	79	4	14	83.5	98	76	8	14	81.6	101	82	11	8	86.6
Total.....	1,180	924	165	91	85.30	1,198	938	152	108	84.6	1,255	967	176	112	84.1	1,337	993	213	131	82.2
																	8,541	1,516	988	83.3



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## LIBRARY.

The number of publications received during the year was 327, being for the most part annual, quarterly, monthly, weekly, and daily reports and periodicals, from the principal astronomical, meteorological, and magnetical observatories of the world.

## PUBLICATIONS.

Eight hundred and eighteen copies of the Monthly Weather Review and seven hundred and fifty copies of the Toronto General Meteorological Register were distributed to all parts of the world. Five hundred copies of the Monthly Weather Chart were distributed to persons in Canada and the United States each month, and eighty copies of the Daily Weather Chart were distributed each day.

## UNITED STATES WEATHER BUREAU.

The Chief of the United States Weather Bureau has continued to interchange reports with this office, and I desire to express my warm appreciation of the uniform courtesy that characterized all communications from that office.

## INSPECTION OF STATIONS.

During the fiscal year the Director visited fourteen of the telegraph reporting stations in North-western Canada and also paid brief visits to five stations where observations are taken by volunteer observers. In the majority of instances, everything was found in good order. In a few cases, however, it was found necessary to clean the mercury in the barometers and call attention to an evident want of care in looking after wet bulb thermometers. The new location of the instruments at Calgary is very satisfactory and it seems likely that good work will be done by Mr. Braden. The instruments at Kamloops were removed from the old site to the residence of Mr. Charles S. Stevens, a newly appointed observer who has since proved himself a most intelligent and good observer, but the unfortunate fact remains that he has no very suitable place for the instruments which are certainly very badly located. At Medicine Hat permission was given Mr. Drinnan to remove the instruments to a site near the railway bridge which will certainly be an advantageous change.

Twenty-four stations were inspected by B. C. Webber, who reports that barometers were cleaned and adjusted at nearly all the stations visited where barometers were in use, the mercury in many of these instruments having become very dirty. The signal masts at Owen Sound and Tobermory were found to be rotting badly. Collingwood will give closer attention to storm reports in future. At Spence the instruments, all but one thermometer were found to be broken and the station was closed. Electric lamps should be substituted at Sault Ste. Marie for the night storm signals as a brilliant electric light alongside the mast quite eclipses the coal oil lamps now in use; the change can be made at small cost. The anemometer exposure at White River is practically useless. A marked improvement was noticeable in the general work at Winnipeg. The anemometer was worn out at Qu'Appelle. At Swift Current a change of barometers was made with the view to obtaining more accurate readings. At Medicine Hat the thermometer and rain gauge exposure has been much improved. At Calgary a new anemometer was placed in position. At Edmonton everything was found to be in very bad shape; the observer, however, was absent in hospital owing to ill health. The volunteer observers at Pincher Creek and Nelson have consented to recommence observations. Rossland was furnished with a full set of instruments excepting an anemometer, the observer who is quite an expert meteorologist being very willing to do the work, and owing to the peculiar topographical situation of this station the reports should be both valuable and interesting. Vernon has been closed and the instruments moved to Coldstream Ranche. At Agassiz the minimum thermometer was faulty and a new one was supplied. At Chilliwack several repairs were found necessary. The time service



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at Vancouver is running smoothly and is much appreciated; the charge of powder used in the gun was, however, insufficient; it has been doubled and the report can now be heard throughout the city.

Mr. H. V. Payne inspected twenty-two stations and reports as follows:— At St. Andrews the mast required painting and a new signal shed was considered necessary; all signals were in good order. At Grand Manan the anemograph was not working satisfactorily, and I would recommend that the position of the anemometer be changed to a more suitable place. At Quaco the signals were all in good order, but it was necessary to alter the hoisting gear. At St. John some slight repairs were necessary to the signals, otherwise everything was in good order. The volunteer observer at Sussex is doing good work and asks for an anemometer and barometer. At Digby some slight repairs were necessary to the signals. At Brier Island the signals required some repairs and a signal shed is much needed. At Yarmouth all instruments, &c., were in good order, the rain gauge was moved to a more exposed position. At Bridgetown the volunteer observer being unable to attend to the observations, a new volunteer observer was obtained and it was ordered that the instruments be handed over to him. At Liverpool some repairs were necessary to day signals and signal house. The observations to be taken by Judge Forbes were started with the necessary instructions. The telegraph service is not good, there being often delay in delivering warning messages. At Halifax complaint was made of the delay in receipt of morning forecasts. The anemograph was not working satisfactorily and results are broken. Military duties at the Citadel cause too frequent changes of observer; all the other instruments were working properly. At Port Hastings it was ordered that the mast be moved to another position, as a new railway cutting interfered with it. A new signal shed is required here and it was pointed out that more particulars were necessary in reports and rain observations. At Liscomb new halliards were necessary. At Canso a signal house was required. Signals were rotting on the ground and lamps were very ill kept. At North Sydney it was necessary to fence in the signal plot, as the public made a practice of damaging the appliances and it was also necessary to have better stays to the mast. At Sydney the anemograph was not working properly and requires replacing. The wind exposure is not good and the premises are not suitable for wind observations, being too low. At Louisbourg the signals were in good order, but the signal house required painting. At Glace Bay the mast will require to be replaced, as it is rotten at the base. At Port Morien the mast required painting and a new arm at the top, also new check timbers. I would recommend that the mast be moved to a better position at the head of the Government wharf. At Ingonish a shed for signals is required and the mast should be properly set up. I consider the agent lives too far away to attend properly to the signals. At Pointe du Chêne the mast required painting and setting up properly. The agent offers to take observations of rainfall and temperature. At Port Colborne the new agent was instructed in his duties and supplies, &c., transferred to him. The mast requires replacing at once, as it is rotten. I would suggest that an iron mast be placed here. The mast would be in a better position if placed further south.

#### TIME SERVICE.

During the year ending June 30, 1900, one hundred and five meridian observations for time were made with the transit instrument, in which 211 standard stars were observed—one solar observation was taken. The position of the stars used were those given in the 'Berliner Jarrbuch.'

The collimation error of the transit instrument has been determined frequently from micrometrical measurements on the collimating telescope and by reversals on Polaris. This error together with the azimuth and level errors have varied very little during the year.

Sunspot observations have been continued throughout the year with the equatorial telescope; maps of the sun's surface 4 inches in diameter showing the spots and facilæ markings, were made on 174 days, and of this number there were 74 days on which no spots were visible.



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The time exchanges with Montreal, Quebec and St. John have all been registered on the chonograph at Toronto. The errors of the Toronto clock and of the timepieces used by the different observatories elsewhere are computed from the latest observations.

The mean time clock of the Tcronto observatory has continued to show absolute standard time of the 75th meridian. The means of keeping it to this adjustment has been described in the preceding annual report.

The different electrical attachments to this clock and the sidereal clock have given great satisfaction. Time has been given weekly to the Magnetical Observatory at Agincourt.

A large *Seconds Electric Clock* showing the hour, minutes and seconds has been constructed and put up in the hall of the observatory. It is controlled by the standard mean time clock in the clock room by means of a make circuit contact worked by the swing of the pendulum.

The time service under control of the meteorological service comprises in addition to the striking of the fire alarm bells in Toronto at 11.55 a.m. daily, the dropping of time-balls at Quebec and St. John and the firing a gun at Vancouver. Serious complaint was made during the past summer of the manner in which the time-ball at Quebec was attended to and inattention to duty on the part of the agent was proven. Everything has now been placed in good order and there is little likelihood of further trouble. The fault of the local agent being in allowing the apparatus at the Citadel to get out of order—not in failing to keep the correct time as this has been done with commendable accuracy.

The time signal on Deadmans Island, Vancouver, has been changed from a dynamite cartridge to a gun, it having been found that the former did not make sufficient noise to be heard in the further parts of the city; it is reported that the signal gives much satisfaction.

The following table shows the difference between the time by 'Standard Observer' and that given at the various exchanges.

The sign † indicates that the time as sent from the various observatories is faster than by the 'Standard Observer.'

The arithmetical mean of the times determined at Toronto and Montreal is the time by 'Standard Observer.'

	Toronto.	Montreal.	Quebec.	St. John.
1899.	Seconds.	Seconds.	Seconds.	Seconds.
July 14.....	+0.17	—0.17	—0.48	
" 31.....	0.00	0.00	+0.46	—1.73
August 18.....	+0.06	—0.06	—0.40	+0.82
" 31.....	—0.23	+0.23	—0.29	+2.38
September 15.....	0.00	0.00	—0.39	+0.61
October 6.....	+0.08	—0.08	—0.71	
" 20.....	—0.02	+0.02	—0.95	+0.78
November 3.....	0.00	0.00	+0.51	+0.95
" 17.....	—0.24	+0.24	—0.18	+0.81
December 8.....	—0.25	+0.25	+1.16	+0.75
" 29.....	—0.03	+0.03	+0.16	+1.29
1900.				
January 30.....	—0.50	+0.50	+0.31	+0.20
February 16.....	+0.43	—0.43	—0.04	+0.11
March 9.....	—0.10	+0.10	+1.89	
" 23.....	+0.23	—0.23		+1.86
April 6.....	+0.30	—0.30	+0.56	+0.42
" 20.....	+0.07	—0.07	+0.37	+0.14
May 4.....	—0.24	+0.24	+0.93	+0.33
" 18.....	—0.23	+0.23	+0.12	+0.05
June 1.....	—0.06	+0.06	—0.28	+0.44
" 15.....	—0.05	+0.05	+0.09	+0.52



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The solar eclipse of May 28, 1900, was observed with the equatorial telescope and the times of the beginning and ending noted, these times differed only by a few seconds from the computed predicted times. The full aperture of 6 inches being used with a power of 35. Eleven photographs were taken during the progress of the eclipse, the aperture being reduced to 3 inches, using the same power. An image of the eclipsed sun was secured of 2·9 inches in diameter.

## SEISMOLOGY.

The seismographs at Toronto and Victoria have been kept in operation and many most interesting records of distant earthquakes have been recorded and very flattering comments on the results obtained in Canada have been made by the Committee of Seismological Research of the British Association for the Advancement of Science. It is satisfactory to find that Canada was one of the first countries to take part in a seismological survey of the world, a survey in which nearly every British colony has since joined. Perhaps the most interesting among the records obtained were those of the great quakes in Alaska in September, when much damage was wrought by sea-waves and land-slides—the shake was registered in all parts of the world, clearly showing that important earthquakes shake the whole globe.

Respectfully submitted,

R. F. STUPART,  
*Inspector.*

## APPENDIX A.

QUEBEC OBSERVATORY,

QUEBEC, July 26, 1900.

To the Director,  
Meteorological Service,  
Toronto.

SIR,—I have the honour to transmit my annual report for the fiscal year ending June 30, 1900.

During the year certain repairs and alterations were made to the building at this station.

The two clocks were cleaned and a new stand made for one of them.

The correct time was given daily as formerly, and several chronometers were rated at this observatory.

I began to drop the time ball at the opening of navigation and then put the same together with the electric apparatus in good working order.

As I am directly responsible for the good working of this service, I think it would be much better to give the signals from the top of the observatory, where I could see whether the ball is dropped at the exact time given by me or not.

All the meteorological observations were taken daily as heretofore, and a report on the condition of the crops was sent at the end of each month during the summer season:

I have the honour to be, sir,  
Your obedient servant,

ARTHUR SMITH,  
*Director.*



## APPENDIX B.

ST. JOHN OBSERVATORY,  
ST. JOHN, N.B., November 31, 1900.

R. F. STUPART, Esq.  
Director, Meteorological Service,  
Toronto, Ont.

SIR,—I have the honour to present my annual report on the St. John Observatory for the fiscal year ending June 30, 1900.

The meteorological work has been continued without change in the instrumental equipment. Since April 1 last the hours of observation have been 8 a.m., 2 p.m. and 8 p.m. standard time of the 75th meridian.

The issue of the morning weather bulletin has been increased and will have to be still further increased to meet additional applications. Reports of prevailing weather at coast stations, the forecasts and synopses contained in the bulletin, are of great value to those interested in shipping as well as being of much use to the public generally. The bulletin continues to be posted in public places, is published by our evening papers and postal facilities are made use of as far as possible in distributing the bulletin to outlying points.

The morning forecasts are telephoned to St. Martins and are publicly posted at the telephone exchange there. Storm warnings are also telephoned and signals displayed at Quaco lighthouse.

Information from the office records is frequently called for; considerable time is taken to prepare statements and answer these requests.

The reliability of the forecasts and storm warnings have received frequent and favourable comment; they are of inestimable value to mariners and others in this district.

Observations of stars with the transit instrument for the establishment of clock errors and rates have been made at frequent intervals.

The daily time signal has been given to the shipping and others by dropping the time ball at 1 p.m. local time.

The standard sidereal clock ordered from the makers in July, 1898, arrived on September 14, 1899. Through the courtesy of the Astronomer Royal, this clock was tested at the Royal Observatory, Greenwich, before shipment.

The clock was made by Victor Kullberg, London. It is of best construction and has the zinc and steel compensated pendulum.

I have the honour to be, sir,  
Your obedient servant,

D. L. HUTCHINSON,  
*Director, St. John Observatory.*



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## MAGNETIC OBSERVATORY.

TORONTO, November 8, 1900.

Major F. GOURDEAU  
Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit herewith the annual report of this observatory for the fiscal year ended June 30, 1900.

It has now been clearly and satisfactorily demonstrated that the new magnetic observatory at Agincourt, Ont., is well located ; there is not the slightest indication of any electric tramway effect shown on the photographic records, and I am also pleased to say that the topography of the surrounding country is such as recent experiments in Europe have shown to be the very best for stopping electric tramway currents : that is several valleys in which are streams, intervene between the city and the observatory. The magnetic instruments have been kept in operation throughout the year and the results obtained will be practically a continuation of the old Toronto Observatory series. Mr. Menzies who has local charge of the observatory continues to reside in a rented house at Agincourt ; should it be that the owner of the house wants to re-occupy her dwelling I shall have to recommend the building of a small house near the observatory. I personally visit the observatory as frequently as duties at the central meteorological office will allow and on two days each month make the absolute determinations of the magnetic horizontal force.

Scientific men of to-day are becoming more and more convinced of the paramount importance of a knowledge of the laws which govern terrestrial magnetism and one by one the various civilized countries are organizing to vigorously attack the problem and it will not be long before this country will be asked to make a complete magnetic survey of the Dominion. Our stationary magnetic observatory will most certainly play an important role in such a survey.

Respectfully submitted,

R. F. STUPART,  
*Director.*



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## APPENDIX No. 5.

SIGNAL SERVICE, CANADA,  
OFFICE OF THE SUPERINTENDENT,  
QUEBEC, QUE., November 15, 1900.

JOHN HARDIE, Esq.,  
Acting Deputy Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to inclose herewith the annual report for the Signal Service for the year ending June 30, 1900.

I have the honour to be, sir,  
Your obedient servant,

J. U. GREGORY,  
*Agent, Department Marine and Fisheries.*

QUEBEC, November 14, 1900.

As in preceding seasons, reports have been received from the stations in the lower part of the river and gulf, recording the weather, wind, condition, location and movement of the ice during the winter and spring months, and during the season of navigation all inward and outward bound vessels as signalled when passing each station.

From the 1st to the 20th of April, three reports per week were obtained and forwarded to the Board of Trade, Montreal, St. John, N.B., and Quebec, and to the Chamber of Commerce, Halifax, N.S., also to the press of Montreal and Quebec, to the agent of the department, Quebec, to the custom-house and immigration agent, to the agents of steamship lines, tug owners, to the pilots for below and above Quebec, also to Messrs. H. Fry & Co., Lloyds agents, Quebec.

From the 21st April reports were received daily and forwarded as above.

The Chief Superintendent of the Quarantine Station at Grosse Isle is also supplied with full information as to weather, wind, and the incoming of all transatlantic or foreign vessels.

The quarantine doctor at Rimouski is also supplied with a report of the incoming mail steamers, name of station and hour of passing being given when vessel was first signalled.

Information was supplied from the bureau here, as in past seasons, to the agents at Anticosti, Magdalen Islands, Meat Cove, C.B., Cape Ray and Cape Race, Newfoundland, from the 13th April, as to weather, wind, movement and condition of the ice in the Gulf and River St. Lawrence up to Montreal for the guidance of any vessel calling for information.

Information as to wind, weather and ice in the vicinity of Anticosti, Magdalen Islands, Meat Cove, St. Pauls Island, and Cape Ray, Newfoundland, is also sent to Point aux Esquimaux in March for the guidance of the sealing fleet.

Grosse Isle quarantine station reported all transatlantic vessels, which has proved very satisfactory to the shipping interests.

These reports are free to the department, being transmitted over the government telegraph line to Quebec.



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## IMPROVEMENT IN GULF SIGNAL SERVICE.

Very much satisfaction has been expressed by the shipping upon learning that arrangements had been completed by the Department of Marine and Fisheries whereby all inward bound vessels showing their official numbers will be reported from marine signal stations in the River and Gulf of St. Lawrence immediately, and all reports will be promptly posted on the bulletin board of the Great North-western Telegraph Company's office in St. Peter street, Quebec, and on that of the Board of Trade in Montreal.

Weather and ice reports will be forwarded twice a day as formerly, and similarly posted.

Arrangements have also been made for repeating all reports received to the pilot station at Father Point, so that pilots will be promptly advised of the locality of inward bound vessels.

## NAVIGATION:

## LAST OUTWARD BOUND VESSELS—1899.

November 23, 1899 —The last Royal Mail steamer, the ss. *Lake Ontario*, sailed on this date.

November 25, 1899.—The last passenger steamer, the ss. *Laurentian*, sailed on this date.

November 30, 1899.—The last freight steamer, the ss. *Mayflower*, sailed on this date.

## FIRST INWARD BOUND VESSELS—1900.

April 23, 1900.—The ss. *Amasis* arrived on this date.

April 24, 1900.—The ss. *Vancouver* arrived on this date.

April 25, 1900.—The ss. *Lake Megantic* and ss. *Jacona* arrived on this date.

I have the honour to be, sir,

Your obedient servant,

JOHN U. GREGORY,

*Agent, Department of Marine and Fisheries.*

## APPENDIX A.

*Report on Ice, &c., in the Straits of Belle Isle and Coast of Newfoundland, as noted by the Agents of the Department at Belle Isle, Cape Bauld, Cape Norman and Greenly Island.*

## BELLE ISLE.

December 17, 1899.—First slab ice came out from the north-east and west of the island. The winds this month were mostly variable.

January, 1900.—The first half of this month was cold with light north-westerly winds prevailing, very little ice made its appearance. During the remainder of this month, south and south-west winds prevailed with a great deal of rain, and a great deal of open water was to be seen at all times, the ice was mostly sheet ice.



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February, 1900.—This month the weather was mild, the thermometer averaging about 23 degrees. The prevailing winds were mostly south and south-east, very little ice was seen this month.

March, 1900.—This month the weather was very mild with the exception of a few days when the thermometer registered below zero. Not much ice made its appearance and a great deal of fog and rain prevailed. Schooner *Fidelle*, of Change Islands, arrived on the 24th to land fishing crew and reported not much ice south. Mostly south and south-west winds prevailed.

April, 1900.—The weather was very mild this month. A considerable amount of heavy close packed ice made its appearance and the straits were blocked on several occasions, north-east and north-west winds mostly prevailing.

May, 1900.—From the 1st to the 12th the Straits were blocked with heavy ice, south east winds prevailing. From the 15th on, the ice gradually disappeared, north-west winds prevailing.

June 4, 1900.—Straits clear of ice. On the 6th inst. the tug *Ingram* of St. Johns, went to the wreck of the *Scotsman*. On the 11th instant some scattered ice made its appearance to the eastward. On the 14th a two-masted German steamer passed outward. On the 20th one Head line steamer passed inward at 9 p.m.

## CAPE BAULD, NEWFOUNDLAND.

As stated in previous reports, the distance from Belle Isle being but 14 miles, the observations as to wind, weather &c., vary but little with the latter place.

December, 1899.—Light winds prevailed this month mostly variable, snow fell on one or two occasions.

January, 1900.—Strong variable winds prevailed this month, very little snow fell, and hardly any ice made its appearance.

February, 1900.—A large quantity of snow fell this month, but very little ice was seen.

March, 1900.—This month was rather mild and quite a lot of rain and fog prevailed, snow fell on several occasions, a large quantity of heavy close-packed ice made its appearance towards the latter part of the month.

April, 1900.—This month was fine and mild, snow fell on one or two occasions; an average of five icebergs seen daily from here.

May, 1900.—Strong gales of north-west winds prevailed this month, about two icebergs seen daily.

## CAPE NORMAN, NEWFOUNDLAND.

October, 22, 1899.—First snow fell on this date. One iceberg was sighted daily this month. Fine weather generally prevailed.

November, 1899.—Snow fell on ten occasions this month, north and north-east winds prevailed. Twelve icebergs were sighted during the month.

December, 1899.—Snow fell on six occasions, east winds prevailed. First ice made its appearance on the 7th inst. Only two icebergs sighted this month.

January, 1900.—A very large quantity of snow fell this month, west and south-west winds prevailed, light close-packed ice in shore throughout the month.

February, 1900.—Snow fell on five occasions this month, variable winds prevailed, heavy close-packed ice in shore throughout the latter part of the month; only two icebergs were sighted.

March, 1900.—Snow fell on several occasions this month, and south and south-west winds prevailed.

April, 1900.—Not much snow fell this month, north-east winds prevailed. A considerable amount of ice remained in shore throughout the month.

May, 1900.—Snow fell on three occasions; north-west winds prevailed; one iceberg was seen daily.

June, 1900.—Very little ice seen this month. Three icebergs seen daily.



GREENLY ISLAND.

November 2, 1899.—First snow fell on this date and the first ice formed on the January 15, 1900, and from this date, heavy open ice filled the Strait until about the end of May, when it all disappeared.

I have the honour to be, sir,  
Your obedient servant,

J. U. GREGORY,  
*Agent, Department of Marine and Fisheries.*

APPENDIX B.

THERMOMETER Readings at Belle Isle, from December 1, 1899, to April 30, 1900.

Date.	Degrees.	Date.	Degrees.	Date.	Degrees.	Date.	Degrees.
1899.		1900.		1900.		1900.	
December 1.....	24	February 1.....	29	March 1.....	10	April 1.....	20
" 2.....	24	" 2.....	16	" 2.....	3	" 2.....	16
" 3.....	30	" 3.....	7	" 3.....	12	" 3.....	14
" 4.....	26	" 4.....	10	" 4.....	24	" 4.....	19
" 5.....	27	" 5.....	6	" 5.....	10	" 5.....	16
" 6.....	8	" 6.....	20	" 6.....	16	" 6.....	24
" 7.....	4	" 7.....	17	" 7.....	9	" 7.....	16
" 8.....	12	" 8.....	14	" 8.....	8	" 8.....	26
" 9.....	10	" 9.....	20	" 9.....	14	" 9.....	31
" 10.....	5	" 10.....	24	" 10.....	0	" 10.....	30
" 11.....	20	" 11.....	20	" 11.....	10	" 11.....	26
" 12.....	18	" 12.....	20	" 12.....	16	" 12.....	22
" 13.....	27	" 13.....	20	" 13.....	17	" 13.....	19
" 14.....	11	" 14.....	25	" 14.....	29	" 14.....	22
" 15.....	7	" 15.....	5	" 15.....	34	" 15.....	24
" 16.....	17	" 16.....	10	" 16.....	35	" 16.....	15
" 17.....	3	" 17.....	20	" 17.....	33	" 17.....	19
" 18.....	8	" 18.....	20	" 18.....	28	" 18.....	30
" 19.....	13	" 19.....	19	" 19.....	17	" 19.....	27
" 20.....	13	" 20.....	17	" 20.....	22	" 20.....	33
" 21.....	13	" 21.....	14	" 21.....	17	" 21.....	32
" 22.....	19	" 22.....	10	" 22.....	20	" 22.....	29
" 23.....	25	" 23.....	12	" 23.....	21	" 23.....	30
" 24.....	23	" 24.....	30	" 24.....	21	" 24.....	28
" 25.....	33	" 25.....	22	" 25.....	22	" 25.....	33
" 26.....	33	" 26.....	20	" 26.....	21	" 26.....	36
" 27.....	33	" 27.....	0	" 27.....	22	" 27.....	35
" 28.....	30	" 28.....	5	" 28.....	29	" 28.....	32
" 29.....	20			" 29.....	30	" 29.....	34
" 30.....	24			" 30.....	29	" 30.....	34
" 31.....	23			" 31.....	20		

Lowest temperature in December, 1899, 17th December ; highest, 26th and 27th December. Lowest in February, 1900, 4th February ; highest 1st February. Lowest in March, 6th March ; highest, 16th March. Lowest in April, 3rd April ; highest, 26th April.

Respectfully submitted,  
(Signed.) MICHAEL COLTON,  
*Lightkeeper.*

I have the honour to be, sir,  
Your obedient servant,  
J. U. GREGORY,  
*Agent, Department of Marine and Fisheries.*



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## SIGNAL STATION, CITADEL.

HALIFAX, N.S., August 27, 1900.

J. PARSONS, Esq.,  
Agent Marine and Fisheries,  
Halifax, N.S.

SIR,—I have the honour to forward herewith a return of the number of vessels reported at this station during the twelve months ending June 30, 1900.

The service has been carried on satisfactorily on the whole, though considerable inconvenience is experienced by reason of the frequent changes in the personnel of the signal staff, which are necessary to regimental requirements. There is no doubt that this inconvenience would be considerably reduced if a permanent hand could be employed at Camperdown. The desirability of this was pointed out in the annual report for the last two years (I believe steps are being taken to carry out this recommendation). Practically the whole of the personnel of the signal station, both the Citadel and Camperdown staffs, is now composed of men of the 3rd Royal Canadian Regiment, who have gradually replaced men of the Royal Garrison Artillery. The few remaining numbers (three) of the latter regiment will shortly be relieved, when the signal staff will consist entirely of men of the 3rd Royal Canadian Regiment.

I have the honour to be, sir,  
Your obedient servant,

(Sgd.) H. B. ROBERTS, Major,  
*Superintendent of Signals.*



PORT OF HALIFAX, N.S.

PARTICULARS of Vessels Signalled during

MONTH.	English Men of War and Troopers.			Foreign Men of War.			Steamers, 1st Class.			Steamers, 2nd Class.		
	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.
1899.												
July .....	3	3	0	0	0	0	23	18	5	76	75	1
August.....	3	3	0	1	1	0	24	22	2	77	75	2
September.....	5	5	0	1	1	0	20	9	11	80	79	1
October.....	4	4	0	0	0	0	25	20	5	67	63	4
November.....	3	3	0	0	0	0	32	26	6	63	59	4
December.....	0	0	0	0	0	0	39	33	6	63	59	4
1900.												
January.....	0	0	0	0	0	0	40	35	5	61	57	4
February.....	0	0	0	0	0	0	40	35	5	52	48	4
March.....	0	0	0	0	0	0	39	34	5	53	50	3
April.....	0	0	0	0	0	0	40	36	4	62	57	5
May.....	4	4	0	1	1	0	30	17	13	64	62	2
June.....	6	6	0	0	0	0	22	14	8	77	71	6
Totals.....	28	28	0	3	3	0	374	229	75	975	754	41

N.B.—Besides those sailing vessels reported, a large number arrived during the night of which no



SIGNAL SERVICE.

the Year ending June 30, 1900.

Ships.			Barques.			Barquentines.			Brigs.			Brigantines.			Schooners, 3-masted or wearing Private Signals.			Monthly Totals.		
Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.	Reported.	Arrived.	Passed.
0	0	0	3	2	1	1	1	0	0	0	0	0	0	0	4	4	0	110	103	7
0	0	0	7	6	1	2	2	0	0	0	0	1	1	0	3	3	0	118	113	5
0	0	0	7	7	0	2	1	1	0	0	0	1	1	0	6	6	0	122	109	13
0	0	0	4	2	2	0	0	0	0	0	0	0	0	0	2	2	0	102	91	11
0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	100	90	10
0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	0	105	94	11
0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	102	93	9
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	83	9
0	0	0	0	0	0	1	1	0	0	0	0	2	2	0	3	3	0	98	90	8
0	0	0	2	2	0	1	1	0	0	0	0	1	1	0	2	2	0	108	99	9
0	0	0	10	10	0	1	1	0	0	0	0	3	1	2	5	5	0	118	101	17
1	1	0	5	5	0	2	2	0	1	1	0	0	0	0	4	4	0	118	104	14
1	1	0	38	34	4	13	12	1	2	2	0	9	7	2	30	30	0	1293	1170	123

notice was taken.

(Sgd.) H. B. ROBERTS, Major, R.E.,  
Superintendent of Signals.



APPENDIX No. 6.

LIVE STOCK SHIPMENTS.

Record of Live Stock shipped from Port of Montreal during the Month of May, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			Fees Collected.	HORSES.		SWINE.		Grain for Feed.	Lbs.	Number of Men.	Cattle for the United States in Bond.
				Shipped.	Lost.	Pat.	Stockers.	Total.		Shipped.	Lost.	Shipped.	Lost.				
	1900.								\$ cts.								
1	May 4.	Brazilian.	Glasgow.					398	5 97								
2	" 4.	Mennon.	Bristol					304	4 56								
3	" 5.	Aleides.	Glasgow					351	7 16	38							
4	" 6.	Montevidean	London.	190				286	11 99	135							
5	" 6.	Manchester City	Manchester.					601	9 62								
6	" 8.	Buenos Ayrean.	Liverpool					596	8 94								
7	" 10.	Jacona.	Newcastle					202	3 03								
8	" 10.	Allandale	London.					173	2 60								
9	" 11.	Kastalia	Glasgow.					400	6 39								
10	" 11.	Lake Superior	Liverpool	78				509	7 64								
11	" 11.	Dagama.	Bristol					315	4 73								
12	" 12.	Dalton Hall	London.					223	4 50	23							
13	" 13.	Dominion.	Liverpool						3 85	77							
14	" 15.	Sarnatian.	Glasgow					526	9 89	40							
15	" 18.	Lake Ontario	Liverpool					380	5 70								
16	" 18.	Etolia.	Bristol					300	4 50								
17	" 19.	Concordia.	Glasgow					368	5 52								
18	" 19.	Maur. Commerce	Manchester.	165				356	6 16								
19	" 19.	Cambrian.	Liverpool						4 80	96							
20	" 20.	Orcadian.	London.					439	12 64	121							
21	" 20.	Fremona	London.					367	10 51	100							
22	" 22.	Pomeranian.	Liverpool					764	11 46								
23	" 23.	Larne	Cardiff.	300				180	4 20								
24	" 24.	Lakonia	Glasgow					394	8 61	54							
25	" 25.	Maur. Corporation	Manchester.	201				347	6 21								
26	" 25.	Yola	Bristol	130				321	5 47								
7	" 27.	Ribston	London.					235	3 53								
	" 29.	Grecian	Glasgow					552	9 53	25							



[illegible]

NOTE.—713 horses sent to South Africa by the British Government.

MONTREAL, May 31, 1900.

POPE & MORGAN,  
*Inspectors.*



RECORD of Live Stock Shipped from Port of Montreal during Month of June, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.			CATTLE.			Fees collected.	HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of Men	United States Cattle in Bond.
				Shipped.	Lost.	Pat.	Stockers.	Total.	Lost.		Shipped.	Lost.	Shipped.	Lost.				
	1900.									\$ cts.					Lbs.	Lbs.		
32	June 1.	Escalona . . . . .	Newcastle..	135				221		4 00								
33	" 1.	Lake Champlain . . . .	Liverpool .					505		7 58								
34	" 2.	Nunuidian . . . . .	"					181		11 02	166							
35	" 3.	Sylviana . . . . .	London. . .					270		4 05								
36	" 3.	Arnage . . . . .	"					270		4 05								
37	" 5.	Manchester Trader. . . .	Manchester.					408		6 12								
38	" 5.	Brazilian. . . . .	Glasgow . .					446		9 84	63							
39	" 7.	Tritonia. . . . .	"	632				313		9 76	38							
40	" 8.	Meannon. . . . .	Bristol. . .					304		4 56								
41	" 9.	Corinthian . . . . .	Liverpool .					580		8 70								
42	" 9.	Kildona . . . . .	London. . .					303		9 15	92							
43	" 13.	Buenos Ayreau. . . . .	Glasgow . .	482				511		11 23	23							
44	" 14.	Aleides . . . . .	"					355		6 18	17							
45	" 15.	Lake Huron . . . . .	Liverpool..					611		9 17								
46	" 15.	Iona. . . . .	London. . .					476		12 19	101							
47	" 15.	Dagama. . . . .	Bristol. . .					315		4 72								
48	" 16.	Montevideo. . . . .	London. . .	193				427		7 47	2							
49	" 16.	Lake Superior . . . . .	Liverpool..					592		8 88								
50	" 16.	Strathnevis. . . . .	London. . .					301		4 52								
51	" 19.	Manchester City . . . .	Manchester.	1,077				622		14 72								
52	" 19.	Sarnatian . . . . .	Glasgow . .					473		7 10								
53	" 21.	Kastalia. . . . .	"					405		7 38	18							
54	" 22.	Concordia . . . . .	Liverpool..	81				540		8 10								
55	" 22.	Etolia . . . . .	Bristol. . .					275		4 13								
56	" 22.	Bellona . . . . .	London. . .					559		8 39								
57	" 22.	Allandale. . . . .	"	140				173		3 30								
58	" 22.	Jacona. . . . .	Newcastle..					254		3 81								
59	" 23.	Earlswood . . . . .	London. . .	150				210		3 90								
60	" 26.	Pomeranian. . . . .	Glasgow . .					519		8 79	20							
61	" 26.	Rosarian. . . . .	London. . .	64				244		3 98								
62	" 28.	Lord Iveagh. . . . .	Cardiff. . .	150				298		5 22								
63	" 28.	Manchester Commerce . .	Manchester.					375		5 63								
64	" 28.	Lakonia . . . . .	Glasgow . .					405		8 03	39							







RECORD of Live Stock shipped from Port of Montreal during Month of July, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.				HORSES.		Hay for feed.	Grain for feed.	Number.	United States Cattle in Bond.
				Shipped.	Lost.	Fat.	Stockers.	Total.	Lost.	Fees collected.	Shipped.	Lost.			
										\$ cts.			Lbs.	Lbs.	
68	July, 1	Endeavour	Newcastle	.....	.....	.....	.....	175	.....	2 63	.....	.....	.....	.....	.....
69	" 3	Grecian	Glasgow	.....	.....	.....	.....	581	.....	8 72	.....	.....	.....	.....	.....
70	" 4	Orcadian	London	.....	.....	.....	.....	482	.....	11 34	20	.....	.....	.....	.....
71	" 5	Amarnythia	Glasgow	622	.....	.....	.....	358	.....	5 37	.....	.....	.....	.....	.....
72	" 6	Yola	Bristol	.....	.....	.....	.....	323	.....	5 60	.....	.....	.....	.....	.....
73	" 6	Daltonhall	London	150	.....	.....	.....	232	.....	3 48	.....	.....	.....	.....	.....
74	" 6	Lord Charlemont	Cardiff	.....	.....	.....	.....	262	.....	3 93	.....	.....	.....	.....	.....
75	" 6	Lake Champlain	Liverpool	.....	.....	.....	.....	500	.....	7 50	.....	.....	.....	.....	.....
76	" 7	Man. Corporation	Manchester	.....	.....	.....	.....	379	.....	5 68	.....	.....	.....	.....	.....
77	" 8	Ribston	London	.....	.....	.....	.....	249	.....	3 73	.....	.....	.....	.....	.....
78	" 8	Rapidan	"	1,557	.....	.....	.....	705	.....	20 86	50	.....	.....	.....	.....
79	" 11	Brazilian	Glasgow	.....	.....	.....	.....	428	.....	6 42	.....	.....	.....	.....	.....
80	" 11	Man. Importer	Manchester	599	.....	.....	.....	422	.....	9 33	.....	.....	.....	.....	.....
81	" 12	Tritonia	Glasgow	621	.....	.....	.....	331	.....	8 88	16	.....	.....	.....	.....
82	" 12	Escalona	Newcastle	135	.....	.....	.....	224	.....	4 03	.....	.....	.....	.....	.....
83	" 13	Fremona	London	.....	.....	.....	.....	385	.....	6 58	16	.....	.....	.....	.....
84	" 14	Corinthian	Liverpool	.....	.....	.....	.....	544	.....	8 86	14	.....	.....	.....	.....
85	" 14	Arnage	London	242	.....	.....	.....	243	.....	4 86	.....	.....	.....	.....	.....
86	" 15	Man. Trader	Manchester	.....	.....	.....	.....	410	.....	6 15	.....	.....	.....	.....	.....
87	" 15	Memnon	Bristol	.....	.....	.....	.....	305	.....	4 58	.....	.....	.....	.....	.....
88	" 18	Larne	Cardiff	148	.....	.....	.....	229	.....	4 18	.....	.....	.....	.....	.....
89	" 19	Rathlin Head	Belfast	.....	.....	.....	.....	.....	.....	80	16	.....	.....	.....	.....
90	" 19	Aleides	Glasgow	.....	.....	.....	.....	356	.....	6 19	17	.....	.....	.....	.....
91	" 19	Buenos Ayrean	"	.....	.....	.....	.....	585	.....	9 78	20	.....	.....	.....	.....
92	" 19	Lake Huron	Liverpool	.....	.....	.....	.....	600	.....	9 00	.....	.....	.....	.....	.....
93	" 20	Lake Superior	"	.....	.....	.....	.....	566	.....	9 49	20	.....	.....	25	.....
94	" 23	Dagama	Bristol	.....	.....	.....	.....	316	.....	4 74	.....	.....	.....	13	.....
95	" 25	Ontarian	Glasgow	.....	.....	.....	.....	414	.....	6 36	3	.....	.....	13	70
96	" 25	Montreal	London	797	.....	.....	.....	1007	.....	19 19	2	.....	.....	44	85
97	" 26	Sylviana	"	.....	.....	.....	.....	274	.....	4 05	.....	.....	.....	11	.....
98	" 26	Kastalia	Glasgow	.....	.....	.....	.....	411	.....	7 08	17	.....	.....	14	.....
99	" 27	Man. City	Manchester	1,257	.....	.....	.....	63	.....	15 81	.....	.....	.....	31	.....
100	" 27	Lake Ontario	Liverpool	.....	.....	.....	.....	33	.....	5 04	.....	.....	.....	14	.....



## SESSIONAL PAPER No. 21

[illegible]

\*2453 horses shipped by the British Government up to date of which we have no account they not having reported to us.

POPE & MORGAN,  
*Inspectors.*

MONTREAL, July 31, 1900.



Record of Live Stock shipped from Port of Montreal during Month of August, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.				Fees Collected.	HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of Men.	United States Cattle in Bond.
				Shipped.	Lost.	Fat.	Stockers.	Total.	Lost.		Shipped.	Lost.	Strayed.	Lost.				
										\$ cts.					Lbs.	Lbs.		
104	Aug. 1	Sarnatian.....	Glasgow.....	.....	.....	.....	.....	517	.....	9 76	40	.....	.....	.....	.....	.....	22	.....
105	" 2	Bellona .....	London.....	.....	.....	.....	.....	543	.....	8 15	.....	.....	.....	.....	.....	.....	22	.....
106	" 2	Boliviana .....	" .....	869	.....	.....	.....	361	.....	9 77	.....	.....	.....	.....	.....	.....	18	.....
107	" 2	Lakonia .....	Glasgow.....	.....	.....	.....	.....	415	.....	6 23	.....	.....	.....	.....	.....	.....	16	.....
108	" 2	Montevidean ..	London.....	.....	.....	.....	.....	255	.....	7 18	67	.....	.....	.....	.....	.....	13	85
109	" 3	Lavonian.....	Liverpool ..	.....	.....	.....	.....	642	.....	9 63	.....	.....	.....	.....	.....	.....	26	.....
110	" 3	Iona.....	London.....	.....	.....	.....	.....	469	.....	9 39	47	.....	.....	.....	.....	.....	22	.....
111	" 4	Montfort.....	Liverpool ..	130	.....	.....	.....	755	.....	11 95	.....	.....	.....	.....	.....	.....	32	.....
112	" 5	Jacona.....	Newcastle..	.....	.....	.....	.....	257	.....	3 86	.....	.....	.....	.....	.....	.....	10	.....
113	" 5	Allandale .....	London.....	40	.....	.....	.....	173	.....	2 80	.....	.....	.....	.....	.....	.....	7	.....
114	" 5	Man. Commerce	Manchester.	.....	.....	.....	.....	511	.....	7 67	.....	.....	.....	.....	.....	.....	21	.....
115	" 7	Lycea.....	Bristol.....	.....	.....	.....	.....	300	.....	4 50	.....	.....	.....	.....	.....	.....	12	.....
116	" 7	Roman.....	Liverpool ..	1,204	.....	.....	.....	690	.....	16 37	.....	.....	.....	.....	.....	.....	34	70
117	" 8	Pomeranian .....	Glasgow.....	.....	.....	.....	.....	488	.....	7 32	.....	.....	.....	.....	.....	.....	20	99
118	" 8	Rosarian .....	London.....	166	.....	.....	.....	359	.....	8 66	49	.....	.....	.....	.....	.....	18	.....
119	" 9	Lord Iveagh.....	Cardiff.....	.....	.....	.....	.....	350	.....	5 25	.....	.....	.....	.....	.....	.....	14	.....
120	" 10	Lake Chaplain ..	Liverpool ..	.....	.....	.....	.....	500	.....	7 50	.....	.....	.....	.....	.....	.....	20	.....
121	" 10	Amarynthia .....	Glasgow.....	.....	.....	.....	.....	366	.....	6 27	17	.....	.....	.....	.....	.....	15	.....
122	" 10	Hurona.....	London.....	.....	.....	.....	.....	496	.....	7 44	.....	.....	.....	.....	.....	.....	20	.....
123	" 11	Numidian .....	Liverpool ..	.....	.....	.....	.....	237	.....	6 81	65	.....	.....	.....	.....	.....	14	.....
124	" 12	Monmouth .....	Bristol.....	.....	.....	.....	.....	265	.....	3 98	.....	.....	.....	.....	.....	.....	10	.....
125	" 12	Concordea.....	Liverpool ..	.....	.....	.....	.....	540	.....	8 10	.....	.....	.....	.....	.....	.....	22	.....
126	" 12	Torr Head.....	Belfast.....	.....	.....	.....	.....	.....	.....	1 00	20	.....	.....	.....	.....	.....	2	.....
127	" 15	Man. Corporat on	Manchester.	.....	.....	.....	.....	451	.....	6 77	.....	.....	.....	.....	.....	.....	18	.....
128	" 15	Oreavian .....	London.....	.....	.....	.....	.....	330	.....	7 10	43	.....	.....	.....	.....	.....	15	15
129	" 15	Brazilian.....	Glasgow.....	.....	.....	.....	.....	436	.....	7 39	17	.....	.....	.....	.....	.....	18	70
130	" 16	Tretonia.....	" .....	565	.....	.....	.....	318	.....	9 25	33	.....	.....	.....	.....	.....	17	39
131	" 18	Corinthian.....	Liverpool ..	.....	.....	.....	.....	503	.....	8 40	17	.....	.....	.....	.....	.....	21	106
132	" 18	Mennon.....	Bristol.....	.....	.....	.....	.....	291	.....	4 81	9	.....	.....	.....	.....	.....	12	.....
133	" 19	Man. Importer.....	Manchester.	.....	.....	.....	.....	420	.....	6 30	.....	.....	.....	.....	.....	.....	17	.....
134	" 21	Indeavour.....	Newcastle ..	.....	.....	.....	.....	175	.....	2 63	.....	.....	.....	.....	.....	.....	7	.....
135	" 22	Lord Charlemont	Cardiff.....	.....	.....	.....	.....	306	.....	4 59	.....	.....	.....	.....	.....	.....	12	.....
136	" 22	Devona .....	London.....	.....	.....	.....	.....	400	.....	8 95	59	.....	.....	.....	.....	.....	20	.....







RECORD of Live Stock shipped from Port of Montreal during Month of September, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			Fees Collected.	HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of Men.	United States Cattle.	Horses for South Africa.
				Shipped.	Lost.	Stocks.	Fat.	Total.		Shipped.	Lost.	Shipped.	Lost.					
	1900.								\$ cts.									
148	Sept. 1.	Rapidan .....	London...	499				678	12 67									
149	" 2.	Lavonian .....	Liverpool ..					302	4 53									
150	" 5.	Maur. City .....	Manchester ..	510				550	10 80									
151	" 5.	Sarnatian .....	Glasgow .....					243	4 70	21							19	
152	" 5.	Kildona .....	London .....					282	4 23									
153	" 6.	Lake Huron .....	Liverpool .....					128	1 92									
154	" 6.	Lakonia .....	Glasgow .....					404	6 06									
155	" 6.	Ottoman .....	Liverpool .....	1,516				472	14 81								100	
156	" 7.	Montfort .....	" .....					724	10 86								136	
157	" 7.	Etolia .....	Bristol .....					177	2 66									
158	" 9.	Larne .....	Cardiff .....					249	3 74									
159	" 10.	Roman .....	Liverpool .....	1,148				690	16 09	21								
160	" 11.	Monte Videau .....	London .....					168	3 58									
161	" 12.	Pomeranian .....	Glasgow .....					257	3 86								36	
162	" 12.	Iona .....	London .....					396	5 94									
163	" 12.	Montreal .....	" .....	1,337				761	19 30	24								
164	" 14.	Anarynthia .....	Glasgow .....					362	6 33	18								
165	" 14.	Lycia .....	Bristol .....					300	4 50									
166	" 14.	Lake Champlain .....	Liverpool .....					213	3 20							48		
167	" 15.	Jacona .....	Newcastle .....					259	3 89									
168	" 15.	Numidian .....	Liverpool .....					213	3 20									
169	" 15.	Man. Commerce .....	Manchester .....					370	5 55									
170	" 19.	Brazilian .....	Glasgow .....					331	6 12	23							30	
171	" 19.	Hurona .....	London .....					400	6 00								100	
172	" 19.	Rosarian .....	" .....					254	3 81									
173	" 20.	Tritonia .....	Glasgow .....	635				337	9 13	18						18	36	*592
174	" 21.	Lord Iveagh .....	Cardiff .....					350	5 25							14		
175	" 22.	Corinthian .....	Liverpool .....					540	8 80							23		
176	" 22.	Mennon .....	Bristol .....	290				270	5 50							12		
177	" 23.	Boliviana .....	London .....	1,008				400	11 04							20		
178	" 25.	Man. Corporation .....	Manchester .....					370	5 55							15		
179	" 25.	Concordia .....	Liverpool .....					540	8 10							20		+706
180	" 26.	Orcadian .....	London .....					276	4 19							11		
181	" 27.	Aleides .....	Glasgow .....					338	6 72	1						15		







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Record of Live Stock Shipped from Port of Montreal during Month of October, 1900—*Concluded.*

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.			Fees Collected.	HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of men.	United States Cattle.	Horses for South Africa.	
				Shipped.	Lost.	Pat.	Stockers.	Total.		Lost.	Shipped.	Lost.	Shipped.						Lost.
1900.																			
185	Oct. 1	Lord Charlemont	Cardiff					279		4 19						11			
186	" 2	Man. Shipper	Manchester					440		6 60						18			
187	" 4	Ontarian	Glasgow					416		6 24						16			
188	" 4	Fremona	London					410		6 15						16			
189	" 4	Kastalia	Glasgow					427		6 41						17			
190	" 5	Lake Ontario	Liverpool					160		3 30	18					8			
191	" 6	Livonian	London					409		6 74						18			
192	" 7	Man. Trader	Manchester					388		5 82						15			
193	" 7	Devona	London				.....	73		10 45	67					24	273		
194	" 10	Sarmatian	Glasgow					244		4 71	21					12			
195	" 10	Ottoman	Liverpool	1,573				704		19 18	15					35	*		
196	" 11	Marina	Glasgow	700				385		10 08	16					20	35		
197	" 12	Montfort	Liverpool					350		5 25						14			
198	" 13	Roman	"	1,200			.....	675		16 83	14					33	100		
199	" 14	Etolia	Bristol					235		4 23	14					10			
200	" 14	Man. City	Manchester	161				350		6 06						15			
201	" 16	Amarynthia	Glasgow					250		3 75						10			
202	" 17	Kildona	London					300		4 50						12			
203	" 17	Pomeranian	Glasgow					180		3 75	21					9			
204	" 20	Numidian	Liverpool					49		1 89	23					3			
205	" 21	Lycia	Bristol				.....	270		4 07						11			
206	" 24	Iona	London	326				471		8 70						20	251		
207	" 24	Brazilian	Glasgow					291		4 36						12			
208	" 25	Man. Commerce	Manchester					328		4 92						13			
209	" 25	Yola	London					301		4 52						12			
210	" 25	Montevidean	"					276		4 14						11			
211	" 25	Lakonia	Glasgow					397		8 60	53					20	50		
212	" 26	Larne	Cardiff					248		3 72						10			
213	" 27	Corinthian	Liverpool					542		8 88	15					23			
214	" 28	Tritonia	Glasgow	599						3 00						2			
215	" 29	Rapido	London	1,166				682		16 06						32	227		



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216	217	Huron.	Monteagle.	London.	Bristol.	490	7 65	6	20	3,751
"	"	30...	31...	.....	.....	300	4 80	6	13	.....
		Total for the month.		5,725		11,760	219 55	289	515	936
		Previously reported.		23,686		70,216	1,293 06	2,421	3,049	4,667
		Total to date.		29,411		81,976	1,512 61	2,710	3,564	5,603
215		Same date.	1899	52,606		75,373	1,616 67	4,452		11,745
260		"	1898	28,900		87,540	1,727 07	5,381		5,261
269		"	1897	54,828		106,681		8,853		10,742
242		"	1896	70,112		87,479		10,033		
224		"	1895	171,252		88,460		11,896		

\* Struck on Isle Ronde. Cattle sent back to yards.



64 VICTORIA, A. 1901

RECORD of Live Stock shipped from Port of Montreal during month of November, 1900.

Number.	Date.	Steamer.	Destination.	SHEEP.		CATTLE.				HORSES.		Hay for Feed.	Grain for Feed.	Number of Men.	United States Cattle in Bond.	Horses to South Africa.
				Shipped.	Lost.	Fat.	Stockers.	Total.	Lost.	Fees collected.	Shipped.	Lost.				
	1900.									\$ cts.						
218	Nov. 1.	Buneos Ayrean.	Glasgow.					260		3 90				10		
219	" 2.	Alcides.	"					278		4 17				11		
220	" 2.	Rosarian.	London.					263		3 95				10		
221	" 2.	Lord Iveagh.	Cardiff.					338		5 07				13		
222	" 2.	Lake Superior.	Liverpool.					132		1 98				5		
223	" 2.	Jacona.	Newcastle.					259		3 89				10	34	
224	" 4.	Ottoman.	Liverpool.	1,573				349		13 85	15			38		
225	" 4.	Andoni.	London.					263		3 95				11		
226	" 4.	Mennon.	Bristol.					268		4 02				11		
227	" 7.	Ontarian.	Glasgow.					415		6 22				16		
228	" 8.	Concordia.	Liverpool.					540		8 10				22		
229	" 9.	Orcadian.	London.	172				261		4 78				11		
230	" 10.	Kastalia.	Glasgow.					410		6 95	16			16		
†231	" 13.	Ottoman.	Liverpool.	1,548				704		19 05	15			35		
232	" 13.	Manchester Shipper.	Manchester.					386		5 79				15		
233	" 14.	Bellona.	Newcastle.					219		3 29				9		
234	" 14.	Sarnatian.	Glasgow.					214		4 21	20			11		
235	" 14.	Fremona.	London.					400		6 00				16		
236	" 16.	Lord Charlemont.	Cardiff.					306		4 59				12		
237	" 16.	Montauk.	London.					227		3 41				9		
238	" 17.	Montfort.	Liverpool.					100		1 50				4		
239	" 17.	Ronan.	"	1,188				677		16 85	15			33		
240	" 18.	Livonian.	"					440		6 60				18		
241	" 18.	Pomeranian.	Glasgow.					176		2 64				7		
242	" 19.	Marina.	"	500				375		9 27				20		
243	" 19.	Manchester Trader.	Manchester.					348		5 22	23			14		
244	" 21.	Devona.	London.	447				509		10 72				22		
245	" 23.	Amarynthia.	Glasgow.					250		3 75	17			10	51	
246	" 23.	Dagama.	Bristol.					259		3 89				10		
247	" 24.	Man. Commerce.	Manchester.					328		4 92				13		
†248	" 25.	Etolia.	Bristol.					250		3 85	2			10		



SESSIONAL PAPER No. 21

	For the month.....	5,427	.....	10,204	.....	186	38	123	.....	4,072,510	378,520	452	85
	Previously reported...	29,411	.....	81,976	.....	1512	61	2,710	.....	24,963,161	4,282,953	3,564	5,603
	Total for the season .....	34,833	.....	92,180	.....	1698	99	2,823	.....	29,035,701	4,661,473	4,016	5,688
237	Total shipments 1899. ....	58,277	.....	81,804	.....	1755	88	4,739	.....	.....	.....	.....	11,745
298	" 1898. ....	34,991	.....	99,189	.....	1954	61	5,827	.....	.....	.....	.....	5,719
304	" 1897. ....	60,638	.....	117,247	.....	2381	34	10,651	.....	.....	.....	.....	12,221
242	" 1896. ....	76,520	.....	96,448	.....	1830	18	10,421	.....	.....	.....	.....	.....
224	" 1895. ....	210,607	.....	94,972	.....	4455	23	13,303	.....	.....	.....	.....	.....
229	" 1894. ....	139,780	.....	86,635	.....	3997	53	5,623	.....	.....	.....	.....	.....
235	" 1893. ....	3,743	.....	83,322	.....	2297	94	1,666	.....	.....	.....	.....	.....
260	" 1892. ....	15,914	.....	98,731	.....	1984	70	1,739	.....	.....	.....	.....	.....

\*Ran into Dobell's wharf, Hochelaga and returned live stock back to yards. †Reshipment of stock returned to yards on the 4th after collision at Dobell's.  
‡Horses on Lake Champlain.

GEO. H. POPE & E. B. MORGAN,  
*Inspectors.*

MONTREAL, November 26, 1900.



RECORD of Live Stock shipped from Port of Halifax, N.S., during the Year, 1899.

Number.	Date.	Steamer.	Destination.	SHEEP.			CATTLE.			HORSES.		SWINE.		Hay for Feed.	Grain for Feed.	Number of Men.	United States Cattle.	Horses for S. Africa.
				Shipped.	Lost.	Fat.	Stocks.	Total.	Lost.	Shipped.	Lost.	Shipped.	Lost.					
	1889.																	
....	April 11.	Scotsman.....	Liverpool....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....

DAVID HUNTER,  
*Port Warden.*

RECORD of Live Stock shipped from Port of Halifax, N.S., during month of March, 1900.

....	March 27.	Vancouver.....	Liverpool....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	Sufficient	.....	4	.....	*
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\* The horses are the chargers of the four field officers of the Leincester Regiment which regiment sailed in the *Vancouver*. They were duly inspected by veterinary surgeon.

GEORGE M. VERNON,  
*Deputy Port Warden.*

RECORD of Live Stock shipped from Port of Halifax, N.S., during month of October, 1900.

....	Oct. 12.	Assyrian.....	Liverpool....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	Sufficient	.....	1	.....	*
------	----------	---------------	---------------	-------	-------	-------	-------	-------	-------	---	-------	-------	-------	------------	-------	---	-------	---

\* This horse was the property of an officer of the British Army.

DAVID HUNTER,  
*Port Warden.*



SESSIONAL PAPER No. 21

SHIPMENTS OF LIVE STOCK FROM PORT OF ST. JOHN, N.B.

The number of cattle shipped from this port during the season of 1899 and 1900 was as follows :—

Months.	SHEEP.		CATTLE.		Fees.	HORSES.		Hay. For Feed.	Grain for Feed.	Men.
	Shipped.	Lost.	Shipped.	Lost.		Shipped.	Lost.			
1899.					\$ cts.			Lbs.	Lbs.	
November and December.....	183	11	3,079	11	58 57	64	....	872,695	282,204	135
1900.										
January.....	645	9	2,885	15	49 13	52	...	792,955	244,297	121
February.....	...	...	2,965	39	47 94	69	....	847,655	247,881	123
March.....	297	...	3,354	29	59 98	163	....	990,320	307,510	146
April.....	138	2	3,189	1	56 19	153	4	945,265	283,731	133
	1,263	22	15,472	95	271 81	501	4	4,448,890	1,365,623	658

I have the honour to be, sir,  
Your most obedient servant,

F. J. HARDING,  
*Agent.*



APPENDIX

STATEMENT of Expenditure by the Marine Department

	1868.	1869.	1870.	1871.	1872.	1873.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—						
Above Montreal.....	40,561 28	42,306 69	46,289 05	44,054 01	57,609 16	61,036 47
Montreal District.....	23,053 56	25,762 54	21,669 49	22,453 52	22,369 00	31,143 14
Below Quebec.....	45,615 35	41,651 73	43,730 61	31,582 75	41,936 00	65,645 00
Nova Scotia.....	46,460 72	56,394 88	43,682 86	76,230 77	67,862 24	100,953 80
New Brunswick.....	20,488 00	23,893 00	27,485 14	20,542 29	23,369 12	29,266 85
Prince Edward Island.....						
British Columbia.....						13,207 09
Construction—						
Above Montreal.....	3,136 15		2,976 83	8,770 55	6,940 45	18,999 38
Quebec.....	7,323 75	7,492 59	1,543 06		57,818 35	39,303 87
Nova Scotia.....	22,041 42	6,905 80	18,967 23	10,948 31	34,760 12	90,181 79
New Brunswick.....			11,555 91	8,735 73	9,561 14	16,691 06
Prince Edward Island.....						
British Columbia.....						
Dominion steamers—						
Quebec.....	69,026 73	37,176 02	34,549 49	59,797 05	47,500 00	51,758 05
Nova Scotia.....	14,778 92	26,603 94	19,759 96	13,139 86	20,999 63	24,999 57
New Brunswick.....						
Prince Edward Island.....						
British Columbia.....					12,115 96	15,984 72
Examinations of masters and mates.....			908 12	1,407 66	4,312 07	6,466 18
Hudson's Bay expedition.....						
Investigations into wrecks.....			140 00		874 00	1,068 89
Marine Hospital, Quebec.....	19,977 36	19,221 45	21,618 73	19,823 18	21,000 00	21,000 00
Marine hospitals.....	1,070 86	15,615 71	15,652 62	15,728 93	53,536 16	27,150 43
Meteorological service.....	8,200 00	8,950 00	8,950 00	9,379 82	12,618 15	18,830 54
Registration of Canadian shipping.....						
Removal of obstructions.....			2,350 07	1,000 00		
Rewards for saving life.....					2,284 32	1,975 13
Signal service.....						
Steamboat inspection.....	7,106 93	7,999 00	7,396 96	8,321 00	8,500 00	13,266 00
Survey, Georgian Bay.....						
Water Police, Montreal.....	27,445 35	10,238 71	9,323 31	8,030 00	10,000 00	14,453 87
"          Quebec.....		12,633 59	9,038 62	9,370 73	10,348 00	18,200 00
Civil Government.....	15,083 88	18,064 25	19,401 05	20,220 96	22,644 52	25,336 04
Steam communication—						
Between Quebec and Maritime Provinces.....						
Between Prince Edward Island and Mainland.....						
Purchase of steamer to replace—						
Glendon.....						
Lady Head.....						
Winter mail service, P.E.I.....						
Tidal observations.....						
Gratuities.....						
Survey, Burrard Inlet.....						
Export cattle trade.....						
	371,070 56	360,899 90	367,129 11	389,537 12	518,958 49	706,817 92



SESSIONAL PAPER No. 21

No. 7.

from Confederation to June 30, 1900.

1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
60,798 75	71,937 18	68,344 18	65,421 00	73,175 11	74,587 78	65,518 61	65,541 21	71,048 50
20,939 13	15,000 00	12,999 48	15,998 00	15,996 00	14,917 95	16,523 88	14,326 36	21,643 05
102,056 09	110,362 00	98,792 93	89,980 41	96,904 00	93,178 61	96,703 87	89,781 29	91,098 66
114,711 91	114,344 51	143,125 56	128,496 00	132,888 95	120,951 33	116,189 60	128,918 59	137,846 15
53,439 04	60,119 02	62,551 61	50,998 00	58,989 00	57,499 02	61,252 82	63,921 90	66,073 00
3,357 71	12,584 64	13,730 53	11,817 00	16,986 66	12,158 72	15,288 17	12,997 36	16,985 72
18,519 50	15,983 72	17,175 97	15,853 00	18,948 78	15,152 73	15,576 99	17,570 72	17,803 00
24,461 86	14,286 65	13,320 40	16,267 98	7,207 96	11,993 75	13,297 81	14,180 02	13,581 00
41,950 82	19,325 00	24,336 47	12,945 29	12,776 47	4,154 58	7,797 75	7,539 76	3,731 31
51,867 94	43,898 63	42,214 55	25,550 00	13,500 00	17,386 97	7,069 01	7,757 52	13,355 00
31,572 60	8,842 97	17,819 85	7,083 82	12,028 13	22,598 14	4,985 53	4,578 52	2,253 80
4,353 93	8,799 07	11,829 61	17,752 00	2,504 47	2,560 88	6,074 50	8,150 06	3,092 00
64,490 00	79,043 70	8,477 67	29 66	42,683 00	44,972 79	49,318 93	8,655 39	3,237 90
30,008 99	22,992 62	62,971 49	49,987 66	43,027 00	42,016 53	49,438 93	64,973 00	44,923 98
10,555 67	41,796 74	133,826 08	38,739 39	28,933 63	16,332 05	14,429 52	36,700 00	31,049 74
4,520 19	5,696 62	16,241 26	61,782 63	12,193 40	7,460 68	9,733 34	15,139 95	23,911 97
2,313 31	366 00	10,156 56	16,095 90	4,249 76	4,250 12	4,253 43	11,788 09	8,504 61
20,456 45	21,994 75	4,672 08	4,050 00	500 00	1,691 00	676 73	3,888 41	3,982 00
45,986 87	37,111 67	466 41	342 65	19,987 50	20,791 77	12,991 23	310 48	863 19
36,700 59	33,580 00	23,795 85	19,965 97	37,487 10	37,445 57	35,040 00	19,964 33	19,938 12
272 30	1,096 46	37,155 72	42,449 55	46,050 24	45,706 13	45,554 51	32,218 94	33,162 45
4,931 78	3,532 86	45,560 03	44,871 38	1,435 10	239 26	257 75	46,163 54	47,464 07
1,000 00	12,200 00	412 06	842 14	462 00	305 86	825 00	607 43	2,013 28
10,291 58	13,081 86	2,292 20	1,958 55	4,071 00	2,533 10	2,263 15	150 00	1,116 51
12,370 86	13,395 00	13,073 01	13,228 38	13,076 46	11,854 34	12,211 65	1,806 13	2,212 00
26,526 66	24,500 00	14,090 00	13,524 29	14,062 00	13,462 74	13,131 06	21,953 26	21,994 74
30,087 23	31,326 18	27,136 68	21,482 08	23,498 06	23,023 26	22,094 48	13,497 81	20,221 82
15,000 00	10,000 00	32,789 18	32,304 12	32,682 50	36,610 19	35,083 95	36,447 50	36,789 46
		750 00						
845,150 09	844,586 09	970,146 27	820,054 38	786,156 23	755,359 47	723,360 89	761,730 62	774,831 53



64 VICTORIA, A. 1901

STATEMENT of Expenditure by the Marine Department

	1883.	1884.	1885.	1886.	1887.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—					
Above Montreal.....	70,116 68	70,788 27	70,697 89	85,713 98	75,690 74
Montreal District.....	22,260 32	22,946 43	23,262 94	33,289 28	16,735 49
Below Quebec.....	102,781 99	101,302 35	118,856 94	131,095 29	131,540 80
Nova Scotia.....	150,793 17	142,909 72	137,439 40	143,153 24	117,708 53
New Brunswick.....	75,946 92	86,670 70	92,130 28	76,046 63	96,425 28
Prince Edward Island.....	17,907 27	19,059 62	20,218 83	22,282 52	17,852 13
British Columbia.....	18,349 06	18,107 54	15,497 76	14,783 75	16,250 43
Cape Race.....					4,453 25
Construction—					
Above Montreal.....	9,782 27	18,432 63	27,977 42	36,678 16	18,383 20
Quebec.....	9,672 50	3,168 48	4,354 87	5,877 84	1,260 00
Nova Scotia.....	9,422 75	12,489 35	4,352 42	5,905 17	5,330 89
New Brunswick.....	1,022 57	2,868 70	7,667 42	2,421 66	5,280 75
Prince Edward Island.....	1,934 49	2,158 60	879 40		384 60
British Columbia.....	1,005 26	2,830 38	5,223 11	4,942 70	321 84
Queen's Printer.....					26 58
Dominion steamers—					
Quebec.....	45,156 13	43,019 13	51,092 98	51,485 03	50,714 52
Nova Scotia.....	37,841 07	27,726 60	42,921 27	30,283 27	32,287 10
New Brunswick.....				24,633 26	14,337 23
Prince Edward Island.....	19,680 00	19,539 52	33,962 54	20,927 58	19,987 67
British Columbia.....	25,484 00	16,111 83	12,485 07	13,430 69	10,809 07
Department.....					13,288 83
Examinations of masters and mates.....	4,021 20	5,580 79	6,656 44	5,239 28	4,858 98
Hudson's Bay expedition.....		480 69	71,374 69	35,217 10	14,762 61
Investigation into wrecks.....	875 64	830 12	385 15	592 63	520 14
Marine hospital, Quebec.....	19,998 53	19,990 34	19,996 68	16,047 95	19,706 96
Marine hospitals.....	29,880 78	31,401 30	45,371 29	32,229 02	32,545 35
Meteorological service.....	51,990 25	56,418 16	56,625 40	56,898 33	57,140 74
Registration of Canadian shipping.....	168 84	189 27	237 88	157 13	233 13
Removal of obstructions.....	35 80	342 76	2,259 21	1,237 34	4,190 83
Rewards for saving life.....	2,534 60	2,614 91	5,221 15	8,147 22	7,363 94
Signal service.....	3,365 33	6,704 17	3,881 05	4,622 00	5,082 17
Steamboat inspection.....	16,209 00	21,893 28	23,235 04	21,775 57	22,847 80
Hydrographic surveys.....	77 81	26,745 54	20,454 68	17,759 36	21,592 55
Water Police, Montreal.....	15,798 24	19,021 93	17,683 59	20,933 75	17,413 47
" Quebec.....	22,520 41	22,958 79	20,399 33	22,922 82	22,935 65
Civil Government.....	37,988 39	38,775 00	29,900 83	30,453 57	37,193 62
Steam communication—					
Between Quebec and Maritime Provinces.....					
Between Prince Edward Island and Mainland.....					
Repairs to wharf.....					
Purchase of steamers to replace—					
Stanley.....	395 55	56,164 71	47,238 03		
Glendon.....					
Lady Head.....				5,985 42	6,312 93
Winter mail service, P.E.I.....					
Tidal observations.....					
Gratuities.....					
Survey, Burrard Inlet.....					
Export cattle trade.....					
Survey, Bay of Quinté.....					
Relief of distressed Canadians.....					
Manning ships.....					
Widow of late A. Warner.....					
McDonald Bros.....					
Parliamentary Returns.....					
Investigating effect of Chicago drainage canal.....					
John McDonald.....					
Longitude, Montreal.....					
Marine biological station.....					
	825,010 82	927,241 61	1,129,901 14	980,120 59	917,557 31



SESSIONAL PAPER No. 21

from Confederation to June 30, 1889—Continued.

1888.	1889.	1900.	1891.	1892.	1893.	1894.	1895.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
85,588 70	72,721 23	84,035 65	93,180 72	87,033 61	87,598 15	78,090 69	82,541 16
17,510 17	12,285 79	118,750 70	122,471 89	116,531 27	120,404 19	124,348 80	124,763 81
108,278 67	112,690 20		139,916 83	148,815 26	150,445 26	137,339 73	140,977 53
133,009 92	140,197 15	139,459 56	61,089 31	66,886 69	71,079 46	59,917 96	69,654 46
73,465 49	78,285 79	61,608 91	19,000 46	17,069 98	16,819 64	15,569 39	17,976 67
14,796 62	19,118 51	16,968 80	19,595 22	26,858 68	24,413 27	27,240 77	21,734 18
19,604 63	16,877 12	16,411 49					
5,124 20	7,358 01						
6,341 97	8,623 76	23,863 09	9,796 28	21,704 05	8,766 62	12,581 15	2,699 40
2,287 86	12,203 06		3,723 14	809 27	10,097 18	4 743 13	3,004 14
5,533 48	6,039 91		4,596 94	1,965 16	4,384 24	3,104 77	4,737 03
1,542 61	2,966 36		208 16	1,845 35	1,271 15	115 45	1,597 80
			410 00	1 56		1,604 00	
5,918 00	1,890 00		14,417 25	9,478 81	2,958 61	6,356 43	180 83
	40 14						
150,659 19	126,629 33	114,956 20	111,437 03	145,899 61	163,097 46	178,183 97	169,661 64
5,063 96	4,381 04	4,117 83	4,255 24	6,363 88	4,116 99	3,745 33	2,757 29
165 00							
513 91	516 67	888 94	1,172 77	603 21	643 49	850 81	351 15
18,777 62	18,643 14	10,279 08	751 75				
30,667 67	33,089 20	31,450 03	33,303 37	34,106 83	35,757 07	38,403 94	38,589 05
59,986 10	58,577 07	58,452 10	62,457 10	67,138 06	64,165 60	66,440 96	64,588 34
897 02	179 21	647 52	1,207 07	462 59	1,476 19	394 00	207 40
2,500 94	3,603 65	5,737 26	3,633 65	2,878 68	1,554 53	202 02	2,217 36
6,825 48	5,503 44	8,150 92	4,952 20	6,398 93	7,432 64	8,014 67	6,591 34
4,441 59	5,092 54	4,976 80	4,700 79	5,014 42	5,040 58	4,668 93	5,311 74
21,430 45	22,213 03	20,989 52	22,183 76	22,736 59	24,386 95	25,961 36	26,385 88
19,424 14	17,808 46	17,969 23	17,677 51	16,451 10	17,542 11	31,461 76	12,653 28
18,725 95	16,948 82	13,164 00	573 80				
18,553 57	14,698 68	8,620 61	7,279 85	6,161 60	5,436 23		
32,728 78	43,501 96	42,835 78	43,253 67	43,195 31	56,477 23	54,988 88	71,373 82
	143,505 60						
					84 90	1,007 67	824 38
7,740 25	1,842 47	2,752 67	7,012 70	3,309 44	4,376 96	6,497 03	6,138 18
		244 75	1,888 71	711 59	5,099 17	10,172 61	11,507 24
	200 00	80 00	1,025 00			3,261 32	
			1,690 12	2,580 45			
			520 85	1,411 57	1,711 73	1,350 83	2,268 74
					2,085 45		
							7 30
							500 00
							160 00
							4,000 00
883,250 85	1,023,801 34	807,417 53	885,410 11	861,426 80	898,720 03	905,654 34	895,828 28



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STATEMENT of Expenditure by the Marine Department from Confederation  
to June 30, 1900.—*Concluded.*

	1895.	1897.	1898.	1899.	1900.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Maintenance of lights—					
Above Montreal.....	87,256 28	80,961 06	87,841 22	92,751 23	82,810 92
Montreal District.....	124,143 66	126,186 00	116,279 88	136,134 79	122,112 42
Below Quebec.....					
Nova Scotia.....	123,234 65	124,671 19	126,386 00	65,072 35	122,414 86
New Brunswick.....	63,018 64	56,771 02	67,369 98	128,674 15	52,491 93
Prince Edward Island.....	17,988 15	16,429 23	18,112 93	20,589 81	42,878 40
British Columbia.....	24,770 44	25,679 52	26,862 03	29,530 20	33,545 95
Cape Race.....					
Construction—					
Above Montreal.....	11,993 84	9,527 84	6,867 69	3,729 62	7,094 64
Quebec.....	3,300 00	296 26	3,649 90	37,838 80	40,319 03
Nova Scotia.....	1,842 94	61 71	4,067 99	3,123 16	4,884 22
New Brunswick.....	200 00	1 60	1,423 34	91 49	
Prince Edward Island.....		452 90	1,409 60	616 96	5,586 91
British Columbia.....	225 50	569 99	6,414 19	19,305 60	
Queen's Printer.....					
Dominion steamers—					
Quebec.....	145,315 28	136,940 11	117,644 39	145,270 75	180,430 65
Nova Scotia.....					
New Brunswick.....					
Prince Edward Island.....					
British Columbia.....					
Department.....					
Examinations of masters and mates....	4,062 82	3,536 29	3,335 40	3,568 26	3,750 69
Hudson's Bay expedition.....		19,091 32	27,050 66		
Investigation into wrecks.....	483 98	565 25	312 77	982 17	773 06
Marine Hospital, Quebec.....					
Marine hospitals.....	36,682 96	37,984 71	38,162 56	37,353 29	37,743 30
Meteorological service.....	66,600 29	67,397 71	64,135 71	73,148 05	67,692 42
Registration of Canadian shipping.....	517 60	531 55	818 33	966 48	266 43
Removal of obstructions.....	456 38	631 86	704 17	745 49	252 19
Rewards for saving life.....	8,004 38	5,955 19	5,081 40	7,049 09	7,007 97
Signal service.....	5,338 76	5,986 12	4,993 88	6,067 49	5,906 83
Steamboat inspection.....	26,321 27	26,837 83	26,342 29	28,035 49	27,965 72
Hydrographic surveys.....	15,099 63	12,352 99	15,306 66	13,664 97	12,600 98
Civil Government.....		74,801 37	74,644 05	72,833 97	63,331 61
Repairs to wharfs.....	2,644 69	1,795 56	1,618 97		697 87
Purchase of steamer Minto.....				144,365 26	41,951 88
Winter mail service, P. E. I.....	7,779 69	21,931 05	9,575 31	8,439 70	1,503 70
Tidal observations.....	9,627 45	13,166 20	3,081 45	5,186 35	4,372 18
Gratuities.....					
Export cattle trade.....	2,887 24		2,499 80	2,757 85	2,762 24
Manning ships.....	746 89				
Parliamentary returns.....	291 08				
Investigating effect of Chicago drainage canal.....	2,500 00				
John Macdonald.....	200 00				
Unforeseen expenses.....					3,452 21
Marine biological station.....				5,709 10	739 61
	793,634 49	867,772 90	856,192 50	1,102,601 91	982,561 97



APPENDIX No. 8.

STATEMENT relating to the Wharfs under the control of the Department, on  
June 30, 1900.

Locality.	Wharfinger.	Date of Appointment of Wharffinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Ontario.</i>				\$ cts.
Cockburn Island.....	Alfred Monck.....	May 20, 1890.	25 p.c. of collections....	71 99
Goderich.....	W. Marlton.....	Feb. 14, 1894.	25 " ".....	296 90
Hilton, St. Joseph Id., Algoma	E. Stubbs .....	June 20, 1898.	50 " ".....	163 59
Kingsville.....	A. E. Malott.....	Nov. 6, 1895.	25 " ".....	22 83
Morpeth .....	C. Stammers.....	Aug. 1, 1894.	25 " ".....	
Port Rowan.....	John Collett .....	May 2, 1898.	25 " ".....	
Richard's Landing, Algoma..	R. Armstrong.....	Mar. 11, 1899.	25 " ".....	239 76
Rondeau .....	W. R. Fellows.....	Dec. 17, 1888.	25 " ".....	83 00
Sault Ste. Marie.....	Geo. A. Boyd. ....	April 9, 1897.	\$112 per month during season of navigation...	623 63
Southampton.....	Geo. McVittie.....	Aug. 16, 1895.	25 p.c. of collections.....	67 51
Summerstown.....	Under lease.....			
Thessalon, Algoma.....	F. Leighfield.....	May 28, 1897.	25 p.c. of collections.....	
Wiarton .....	H. R. A. Ely. ....	Dec. 10, 1890.	25 " ".....	151 60
<i>Quebec.</i>				
Total.....				1,720 81
Agnes.....	L. A. Roy.....	Nov. 27, 1891.	25 p.c. of collections....	
Anse St. Jean.....	F. Savoie.....	Mar. 13, 1895.	25 " ".....*	
Baie St. Paul.....	Vacant.....		25 " ".....	
Baie St. Paul, Isolated Block.	A. Simard.....	Aug. 25, 1891.	25 " ".....	
Beauport.....	D. Giroux.....	Nov. 11, 1896.	25 " ".....	75 58
Berthier.....	E. Gaumond.....	July 5, 1897.	50 " ".....	96 25
Cap-à-l'Aigle.....	Jos. Guay.....	Oct. 7, 1896.	25 " ".....	
Carleton.....	Jos. E. Cullen.....	Mar. 25, 1896.	\$50 per annum.....	26 89
Cascades.....	Moïse Moreau.....	Oct. 20, 1897.	25 p.c. of collections....	
Cedars.....	J. Reay .....	April 29, 1898.	25 " ".....	52 73
Chicoutimi.....	T. E. Saucier.....	May 16, 1898.	25 " ".....	
Coteau du Lac.....	M. St. Amour.....	Sept. 21, 1896.	25 " ".....	73 56
Coteau Landing.....	J. A. Prieur.....	May 25, 1897.	25 " ".....	
Echo Vale, Lake Megantic...	D. P. Matheson.....	May 16, 1894.	25 " ".....	
Grand River.....	Geo. Beaudin.....	Nov. 16, 1896.	25 " ".....	185 21
Isle aux Grues.....	Jos. Painchaud.,...	Feb. 17, 1890.	25 " ".....	0 95
Isle Perrot.....	Roger Leduc .....	Oct. 20, 1897.	25 " ".....	
Knowlton's Landing.....	L. Knowlton.....	Nov. 26, 1897.	25 " ".....	30 00
Lacolle.....	R. J. Robinson.....	Mar. 8, 1894.	25 " ".....	7 88
Les Eboulements.....	M. Tremblay.....	Sept. 4, 1894.	25 " ".....	
L'Islet .....	Octave Morin.....	Feb. 8, 1893.	25 " ".....	
Longueuil .....	Chas. Poirier.....	Oct. 22, 1896.	25 " ".....	12 92
Magog.....	Edward Addy .....	June 20, 1898.	25 " ".....	
Matane.....	David Banville.....	April 29, 1898.	25 " ".....	
Murray Bay.....	Elie Maltais.....	Aug. 15, 1893.	25 " ".....	
New Carlisle.....	John C. Hall.....	June 4, 1889.	25 " ".....	165 08
Percé.....	T. W. Flynn.....	Jan. 19, 1893.	25 " ".....	17 84
Port Daniel.....	John Enright.....	Sept. 11, 1890.	\$50 per annum.....	40 57
Port Lewis.....	Sam. Carson.....	" 21, 1899.	25 p.c. of collections....	
Rimouski.....	Chas. Lepage.....	July 24, 1894.	25 " ".....	
Rivière Ouelle.....	J. H. dit Beaulieu..	Nov. 28, 1892.	25 " ".....	
Rivière du Loup.....	P. E. Tremblay.....	May 26, 1900.	25 " ".....	
St. Anicet.....	S. Dupuis.....	Sept. 14, 1896.	25 " ".....	
St. Alphonse de Fagotville...	Abel Tremblay.....	July 7, 1891.	25 " ".....	6 77

\* Commission on collections not to exceed \$200 per annum.



STATEMENT relating to Wharfs, &c.—Continued,

Locality.	Wharffinger.	Date of Appointment of Warfinger.	Renumeration allowed.	Amount deposited to credit of Receiver General.
Quebec—Con.				\$ cts.
St. Jean d'Orléans.....	L. Lachance.....	Sept. 26, 1896.	25 p.c. of collections.....	100 22
St. Jean Port Joli.....	J. Pelletier.....	Sept. 14, 1896.	25 ".....	
Ste. Cécile du Bic.....	L. N. Côté.....	July 20, 1891.	25 ".....	449 97
St. Laurent d'Orléans.....	Ed. Chabot.....	Aug. 25, 1894.	25 ".....	
St. Thomas de Montmagny...	L. L. Dionne.....	Oct. 22, 1896.	25 ".....	4 16
St. Zotique.....	J. M. Leroux.....	Sept. 21, 1896.	25 ".....	
Tadoussac.....	A. Christiansen.....	Oct. 20, 1897.	25 ".....	
Trois Pistoles..	D. Damour.....	May 10, 1895.	25 ".....	
Valois Point.....	L. Gastonguay.....	Oct. 20, 1897.	25 ".....	
Ville Marie.....	Jules Mailland.....	Feb. 2, 1899.	25 ".....	
Nova Scotia.				Total..... 1,346 58
Arisiag.....	H. R. McAdam.....	Dec. 30, 1898.	25 p.c. of collections.....	
Avonport.....	Robert Shaw.....	Nov. 23, 1888.	25 ".....	
Babbins Cove.....	Alex. Thomas.....	Oct. 20, 1897.	25 ".....	4 30
Barrington.....	J. H. Christie.....	Aug. 31, 1896.	25 ".....	195 50
Bass River.....	Jotham Fulton.....	Jan. 6, 1898.	25 ".....	
Bayfield.....	W. McDonald.....	Oct. 30, 1894.	25 ".....	40 23
Belliveau Cove.....	St. Clair Thérieau...	Nov. 24, 1892.	25 ".....	110 42
Broad Cove.....	John Teal.....	June 12, 1893.	25 ".....	
Broad Cove Marsh.....	Hugh McDonald.....	Oct. 19, 1892.	25 ".....	
Brooklyn.....	F. T. Gardiner.....	" 20, 1882.	20 ".....	
Canada Creek.....	Henry Dickey.....	Aug. 12, 1899.	25 ".....	0 54
Cape Cove.....	J. A. Ellis.....	May 14, 1897.	25 ".....	21 74
Centreville.....	Alfred Ward.....	" 29, 1897.	25 ".....	81 55
Chipman's Brook.....	Jas. Misaner.....	Nov. 23, 1888.	25 ".....	
Church Point.....	Chas. F. Belliveau...	Aug. 20, 1892.	25 ".....	78 52
Cow Bay.....	John McAulay.....	Dec. 10, 1896.	7½ ".....	159 02
Cranberry Head.....	Abram Thurston.....	Feb. 16, 1889.	25 ".....	
Cribbens Pier..	A. R. Boyd.....	Oct. 2, 1895.	25 ".....	
Delap's Cove.....	R. W. McCaul.....	Nov. 28, 1889.	25 ".....	6 00
Descousse.....	John Pertus.....	Sept. 10, 1898.	25 ".....	55 80
Digby.....	W. W. Hayden.....	April 20, 1897.	25 ".....	1,728 82
Eagle Head.....	Nathan Leslie.....	" 9, 1889.	25 ".....	
East Bay.....	Donald McInnis (Ronald's son).....	" 5, 1886.	50 ".....	
East River, Sheet Harbour...	Malcolm McFarlane.	May 20, 1890.	25 ".....	
Grand Narrows, Victoria Co..	F. X. McNeil.....	Nov. 11, 1896.	25 ".....	
Grand Narrows, Cape Breton Co.....	Neil McNeil, jr.....	Aug. 6, 1898.	25 ".....	4 38
Hall's Harbour.....	T. A. Neville.....	Jan. 8, 1897.	25 ".....	18 48
Hampton.....	Judson Foster.....	Aug. 25, 1888.	25 ".....	16 40
Harbourville ..	Isaac Cook.....	May 28, 1897.	25 ".....	25 69
Horton Landing.....	F. G. Curry.....	Apr. 30, 1898.	25 ".....	4 85
Irish Cove.....	Colin Cash.....	May 28, 1895.	25 ".....	18 05
Jordan Bay.....	John Fredericks.....	Feb. 20, 1900.	25 ".....	38 63
Kelly Cove.....	Jos. B. Huskins.....	Apr. 11, 1899.	25 ".....	
Lismore.....	D. A. McKinnon...	July 5, 1895.	25 ".....	
Maitland, Hants Co.....	W. B. Smith.....	June 8, 1894.	25 ".....	
Maitland, Yarmouth Co.....	J. Ellis.....	Dec. 10, 1896.	25 ".....	42 24
Margaretsville.....	C. S. McLean.....	May 7, 1897.	25 ".....	103 30
Meteghan Cove.....	H. F. Robicheau....	" 28, 1897.	25 ".....	21 59
Meteghan River.....	D. D'Entremont....	" 14, 1897.	25 ".....	58 69
Militia Point.....	D. McIntosh.....	Aug. 25, 1892.	25 ".....	
Morden.....	John Redgate.....	Nov. 16, 1893.	25 ".....	15 36
Northside, Boularderie.....	Dun. McKenzie.....	" 26, 1897.	25 ".....	
Oak Point (Kingsport).....	Rent from Railway Company.....			200 00
Ogilvie.....	M. Donnellan.....	July 13, 1893.	25 p.c. of collections.....	13 71
Parrsboro'.....	Thompson Tipping..	" 26, 1888.	25 ".....	
Pickett's Wharf.....	Freeman Eaton....	Aug. 2, 1899.	25 ".....	169 08
Plympton.....	Wm. Smith.....	" 8, 1890.	25 ".....	
Point Brulé.....	Alex. Craig.....	Dec. 26, 1898.	25 ".....	1 35
Port George.....	Outhit Douglas.....	June 26, 1900.	25 ".....	62 98



## SESSIONAL PAPER No. 21

STATEMENT relating to Wharfs, &c.—*Continued.*

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Nova Scotia—Con.</i>				\$ cts.
Port Hood .....	Albert Macdonnell..	May 22, 1900.	25 p. c. of collections....	
Port Joli .....	Jos. S. McAdams...	Feb. 5, 1900.	25 " .....	
Port La Tour .....	David Sholds .....	Feb. 1, 1900.	25 " .....	4 46
Port Lorne .....	Freeman Beardsley ..	June 27, 1897.	25 " .....	28 64
Salmon River, Digby Co. ....	J. M. Deveau .....	Nov. 29, 1890.	25 " .....	
Salmon River, Halifax Co. ....	H. J. Balcom. ....	Feb. 17, 1899.	25 " .....	211 50
Saulniersville .....	John T. Saulnier....	Aug. 25, 1888.	25 " .....	25 18
Tancook Island .....	Amos Stevens .....	Mar. 11, 1898.	25 " .....	
Tidnish .....	A. E. Sampson .....	Aug. 20, 1896.	25 " .....	
Tracadie .....	J. M. Hall .....	Nov. 6, 1888.	25 " .....	
Tusket Wedge .....				
Victoria .....	William Brown .....	Feb. 11, 1889.	25 p. c. of collections....	15 72
Walla e. ....	Don. McKenzie .....	Dec. 16, 1892.	25 " .....	
Wallace Harbour, South side.	George Boyle .....	" 26, 1899.	25 " .....	
West Pubnico .....	Chas. C. D'Entremont. ....	Mar. 28, 1898.	25 " .....	19 20
West River, Sheet Harbour.	Malcolm McFarlane.	Sep. 3, 1889.	25 " .....	
White Point .....	Elisha West .....	Jan. 9, 1889.	25 " .....	
White Waters .....	C. V. Anthony. ....	Feb. 14, 1898.	25 " .....	
<i>New Brunswick.</i>				Total ..... 3,601 92
Anderson's Hollow .....	W. C. Anderson .....	Feb. 13, 1889.	25 p. c. of collections....	6 12
Black River .....	Robt. McLeod .....	Mar. 28, 1898.	25 " .....	
Buctouche .....	J. J. LeBlanc, ....	May 2, 1892.	25 " .....	42 48
Campbellton .....	Alfred J. Venner .....	June 10, 1893.	25 " .....	196 11
Cape Tormentine .....	E. T. Allen .....	Oct. 20, 1897.	25 " .....	438 41
Clifton, Stonehaven .....	S. Payne .....	Nov. 9, 1894.	25 " .....	33 05
Dalhousie, .....	W. J. Smith .....	June 27, 1891.	25 " .....	58 59
Edgett's Landing .....	Thos. Barnett .....	July 5, 1895.	25 " .....	12 79
Gardner's Creek .....	Robert Wallace. ....	Dec. 11, 1899.	25 " .....	
Hopewell Cape .....	Geo. D. Wilson. ....	Apr. 10, 1899.	25 " .....	50 19
Kingston .....	Jas. Gordon .....	" 9, 1898.	25 " .....	
Neguac .....	B. Poirier .....	June 17, 1897.	25 " .....	4 31
Quaco .....	Wellington Vale .....	Dec. 19, 1899.	25 " .....	10 73
St. Louis .....	C. Frigand .....	Oct. 29, 1895.	25 " .....	
St. Mary's .....	M. J. S. LeBlanc .....	Mar. 1, 1897.	25 " .....	
Tracadie .....	Prosper Savoy .....	Sep. 23, 1899.	50 " .....	6 48
<i>Prince Edward Island.</i>				Total ... 859 23
Annandale .....	W. C. Jenkins .....	May 4, 1897.	25 p. c. of collections ...	41 74
Bay View .....	Joseph Harrington ..	Oct. 2, 1885.	25 " .....	7 05
Belfast .....	Thos. McLennan .....	July 21, 1890.	25 " .....	86 82
Brush Wharf .....	Levi R. Ings .....	Sep. 18, 1885.	25 " .....	109 50
Campbell's Cove .....	Angus McIntyre .....	Oct. 17, 1888.	25 " .....	
Chapel Point .....	Roland McCormack ..	Sep. 18, 1885.	25 " .....	11 53
China Point .....	W. S. N. Crane .....	" 18, 1885.	25 " .....	9 03
Clifton .....	John Gunn .....	May 24, 1900.	25 " .....	
Cranberry, East River .....	James Hughes .....	Mar. 11, 1898.	25 " .....	
Crapaud and Victoria Pier ..	E. McKinnon .....	July 7, 1897.	25 " .....	238 77
Georgetown .....	James Bourke .....	" 2, 1885.	25 " .....	5 98
Haggerty's Wharf .....	M. Burnett .....	Feb. 14, 1898.	25 " .....	
Hickey's Wharf .....	Mark Webster .....	Oct. 22, 1896.	25 " .....	12 00
Higgin's Shore .....	G. G. Henry .....	Nov. 9, 1891.	25 " .....	
Hurd's Point .....	R. Robblee .....	Oct. 6, 1888.	25 " .....	21 98
Kier's Shore .....	W. Hodgson .....	June 10, 1895.	25 " .....	74 62
Lambert .....	Wellington Johnston ..	May 3, 1900.	25 " .....	
Lewis Point .....	J. G. Scrimigeour .....	Oct. 14, 1896.	25 " .....	
McGee's Wharf .....	Norman Gallant .....	Nov. 9, 1891.	25 " .....	
Mink River .....			25 " .....	
Murray Harbour, North .....	Jas. P. Clow .....	Aug. 25, 1900.	25 " .....	11 90
Murray Harbour, South .....	J. McKinnon .....	Jan. 27, 1896.	25 " .....	
Nine Mile Creek .....	Edward Harrington ..	Oct. 29, 1885.	25 " .....	



STATEMENT relating to Wharfs, &c.—*Concluded.*

Locality.	Wharfinger.	Date of Appointment of Wharfinger.	Remuneration allowed.	Amount deposited to credit of Receiver General.
<i>Prince Edward Island—Con.</i>				\$ cts.
North Cardigan. ....	Donald McIntyre ...	July 2, 1885.	25 p. c. of collections....	29 08
Pinette. ....	A. H. Hubley. ....	Dec. 18, 1897.	25 " ....	
Pownal.....	M. M. Haley.....	Oct. 13, 1896.	25 " ....	89 73
Red Point .....	Arch. Smith.....	April 3, 1900.	25 " ....	
St. Mary's Bay.....	John Dickson. ....	Dec. 10, 1896.	25 " ....	23 65
South Rustico, Oyster Bed				
Bridge ..	D. Gallant.....	Feb. 23, 1895.	25 " ....	11 98
Stevens and Montague. ....	Well'gt'n A. Johnston	May 3, 1900.	25 " ....	44 44
Sturgeon River.....	Bernard Kearney ...	Sep. 18, 1885.	25 " ....	27 44
Tignish. ....	A. J. Gaudet .....	Aug. 28, 1898.	25 " ....	33 74
Vernon River. ....	J. G. McKenzie.....	Oct. 19, 1885.	25 " ....	101 02
Wood Island .....	Jas. Young. ....	Apr. 10, 1899.	25 " ....	17 14
Total .....				1,009 14

RECAPITULATION.

	\$ cts.
Ontario.....	1,720 81
Quebec.....	1,346 58
Nova Scotia.....	3,601 92
New Brunswick.....	859 23
Prince Edward Island.....	1,009 14
Total wharfage dues collected and placed to credit of Receiver General, .....	8,537 68
ADD—Fees received by undermentioned harbour masters in excess of remuneration allowed :—	
Harbour Master—Fort William, Ont. ....	\$ 94 50
" Midland, Ont.....	21 50
" St. Johns, Que.....	137 00
" Canso, N. S. . . .	13 00
" International Pier, N.S.....	35 00
" Louisburg, N.S.....	123 10
" Chatham, N.B.....	18 50
" Dalhousie, " .....	8 92
" Hillsboro' " .....	82 14
	533 66
Total Revenue from Wharfs and Harbours . . . . .	9,071 34



## APPENDIX No. 9.

STATEMENT of Sick Mariners' Dues collected for the fiscal year ended June 30, 1900.

Quebec.	\$ cts.	Nova Scotia—Continued.	\$ cts.
Gaspé .....	157 17	Liverpool.....	56 62
Montreal .....	7,702 00	Lockeport.....	19 82
Paspébiac.....	350 04	Lunenburg.....	481 32
Percé.....	77 28	Middleton ...	1 22
Quebec .....	5,986 12	North Sydney .....	1,162 40
Rimouski.....	494 52	Parrsboro' .....	735 24
St. Armand. ....	22 78	Pictou.....	461 52
St. Johns.....	1,479 98	Port Hawkesbury..	140 82
Sorel .....	0 33	Port Hood.....	12 02
Stanstead.....	365 02	Shelburne.....	145 20
Three Rivers.....		Sydney.....	5,428 75
Total.....	16,635 24	Truro.....	3 28
		Weymouth.....	151 20
		Windsor.....	967 02
		Yarmouth.....	604 96
		Total .....	22,625 15
<i>New Brunswick.</i>			
Bathurst.....	219 81	<i>Prince Edward Island.</i>	
Chatham.....	1,557 58	Charlottetown.....	285 00
Dalhousie.....	979 76	Summerside .....	77 76
Moncton .....	1,536 76	Total .....	362 76
Newcastle.....	827 10		
Sackville.....	275 90	<i>British Columbia.</i>	
St. John.....	5,753 46	Nanaimo.....	3,196 62
St. Stephen.....	132 58	New Westminster... ..	177 38
Total.....	11,282 95	Vancouver.....	1,549 58
		Victoria .....	4,154 44
		Total .....	9,078 02
<i>Nova Scotia.</i>		Total .....	59,984 12
Amherst. ....	568 36	Less—Refunds .....	12 28
Annapolis.....	283 66	Grand Total .....	59,971 84
Arichat.....	50 42		
Antigonish .....	2 38		
Baddeck.....	2 88		
Barrington.....	10 78		
Canso.....	270 46		
Digby.....	165 62		
Halifax. ....	10,754 28		
Kentville .....	144 92		



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## APPENDIX No. 10.

## REPORT ON LIFE-SAVING STATIONS.

HALIFAX, N.S., October 18, 1900.

To the Deputy Minister  
Marine and Fisheries Department,  
Ottawa.

Sir, I have the honour to submit my annual report on the Life-Saving Stations in the Maritime Provinces, that at Sable Island excepted, as being now by your instructions under the inspection of Mr. C. A. Hutchins, Superintendent of Lights for this province

## INSPECTION OF STATIONS.

The whole of the stations have been visited during the year ending June 30 last, from time to time, and it is most satisfactory to me to be able to state that they have been maintained in excellent and efficient order.

## SERVICES AT WRECKS.

The only wreck which occurred was that of the ss. *Portia* in June, 1899. The life boat from Duncan's Cove went off to her assistance, but her services were not required.

## SEAL COVE, GRAND MANAN.

The station at Seal Cove, Grand Manan, N.B., has been visited by me recently, and commodious ways constructed of railway rails have been laid down, and other appliances established which render the station one of the most effective in the department.

## CLARK'S HARBOUR NEAR CAPE SABLE.

The station at Cape Sable has been abandoned under your instructions, and a new life boat on the Beebe-McClellan model, improved by having lower ends, has been built by Mr. John Morrison of Shelburne, and placed at the station now selected at Clark's Harbour.

Mr. Joseph M. Kenny has been appointed as coxswain with an efficient crew of six active boatmen.

A boat house with all necessary appliances has been placed on the Nova Scotia wharf; and arrangements have been made for the use of one of the local steam tugs, in the event of a wreck, or a vessel in distress, requiring assistance at a distance from the station.

## DUNCAN'S COVE, CHEBUCTO HEAD.

At Duncan's Cove, near Chebucto Head, a Lyle gun and beach apparatus, has been placed under the charge of Mr. John Holland the coxswain of the station, and he and his crew have been instructed and drilled in its use.



## SESSIONAL PAPER No. 21

## ST. PAUL ISLAND, CABOT STRAIT.

This station has also been supplied with a Lyle gun and beach apparatus, and placed in the charge of the superintendent of the island, Mr. S. C. Campbell. That officer and his staff have been instructed and drilled by me in the use of the same.

With this apparatus, and the new life-boat placed at this station last year, Atlantic Cove, on the eastern or Atlantic side of the island, the establishment has been made much more efficient, but I would strongly recommend that a good surf boat with a boat house should be established at Trinity Cove on the western side of the island, as the superintendent, Mr. S. O. Campbell, has reported to me that the fog alarm at Atlantic Cove cannot be at all times with easterly winds heard even at short distances by ships bound down the gulf, owing to the high land above it intercepting the waves of sound in a westerly direction. In consequence several ships have grounded on the western side of the island.

I would also recommend that telephonic communication should be established between the main station at Atlantic Cove, and the S.W. and N.E. lighthouses, to enable the keepers at those points to report to the superintendent any cases of wreck on the western side of the island.

Much loss of valuable time, and possibly life, might be saved by having telephonic communication on the island, instead of the only means at present of giving intelligence by messengers on foot from the lighthouses.

## HALIFAX.

A Lyle gun and apparatus has recently been established here, but a cart is required to convey the same to any part of the coast where it may be needed. A volunteer crew should also be formed in connection with it.

## REMARKS ON THE LYLE GUN APPARATUS.

A somewhat long experience in command of coast guard stations in England and Scotland, and one of H. M. revenue cruisers in the Berwick District, in my earlier career in the service, gave me certain experience and knowledge respecting life saving duties, and I have always been of the opinion that the weight, and bulky nature of the heavy whip, the hawser, and the breeches buoy, have as a rule rendered the assistance to wrecks much more difficult and tardy than necessary.

The Lyle gun, with the sets of lines and ammunition, or a set of rocket apparatus with 6 rockets, frame, and line, could be easily conveyed by a hand truck or barrow over ordinary tracks by 4 men, while the whole apparatus, needs a cart and horse with say 4 men, or 8 or 10 men without a horse, to take it over made or rough roads.

To obviate this I would most respectfully suggest that parliamentary authority should be obtained to render it obligatory for all ships, steam or sailing, over 100 tons register, to be provided with whips, hawsers and breeches buoys.

Every ship in her ordinary equipment has the gear on board to provide sufficient rope for the whip and hawser.

Of course in the excitement caused by disaster, or in the event of heavy seas breaking over a stranded ship, it might be difficult to splice the running gear or ordinary hawsers with which all vessels are provided, sometimes the latter are only in short lengths, and there should be no objection raised by owners to have two spare coils of rope for life saving purposes.

I think it is unfair to seamen and passengers that owners of ships should not be compelled to do their share of the life saving service, when the Government provide life boats, crews, Lyle guns, carriages and an expensive service, without as in Great Britain a dollar being subscribed by the public or the shipping interest.



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## BOATS. REMARKS THEREON.

The Dobbin, the Beebe-McClellan, and in a few instances the ordinary surf boat on fine lines, are in use at the life saving stations in the Maritime Provinces and on the Great Lakes.

*The Dobbin Boat.*

The Dobbin boat is self-bailing and self-righting with high ends to ensure those qualities.

The cost of one of these boats without gear, such as lines, life-jackets, &c., is about \$575.00.

In light winds and smooth water they pull fast, but in head winds and a heavy sea they are slow ; in a heavy gale on shore they would be unserviceable.

*The Beebe-McClellan boat.*

The Beebe-McClellan boat not being self-righting, has the bow and stern as in ordinary surf boats, but lately a boat with lower ends has been adopted with great success at the St. Paul and Clarke Harbour Stations.

These boats are lighter, equally effective and cost less than half the Dobbin boats. They have been built by Mr. John Morrison of Shelburne, for \$250 each.

In the United States, with the numerous life-saving stations under the effective superintendence of Sumner Kimball, Esq., General Superintendent at Washington, as a rule the Beebe-McClellan and surf boats are used, for the reason I have given in the above remarks.

I would therefore strongly recommend that the Beebe-McClellan type of boat should be adhered to in the future, and that when expensive or extensive repairs are required to the Dobbin boats, that they should be replaced by the Beebe-McClellan class of boats.

In thus advocating the Beebe-McClellan type of boats in preference to the Dobbin model, I am supported by the valuable and reliable opinion of the General Superintendent of the life-saving service in the United States, Mr. Samuel C. Campbell, the superintendent of St. Paul Island, and the coxswains of the life-saving stations, where the Beebe-McClellan boats are stationed.

I have the honour to remain, sir,

Your obedient servant,

BLOOMFIELD DOUGLAS, R. N. R.

*Naval Assistant.*



SESSIONAL PAPER No. 21

Life Saving Stations maintained by the Dominion Government.

Number.	Stations.	Established.	Coxswain.	Crew.	Coxswain's Salary.	Per Annum.	Pay of Crew.	Description of Boat.	Cost.	Where Built.	Equipment.	Remarks.
1	Bay of Fundy Seal Cove.....	1898	F. Benson.....	7	75	\$	\$1.50 per drill and extra when engaged saving life.	Beebe-McLellan surf-boat, self-bailing, 25 feet long.	250	Shelburne, N.S..	Full regulation	Iron rails laid in 1900.
2	Yarmouth.....	1886	A. Cain.....	7	75	"	"	Dobbin's pattern, self-bailing and self-righting, 25 feet long.	575	Dartmouth.....	"	"
3	Mud Island.....	1887	J. Pitman ..	.....	80	.....	.....	Fishing boats and dories	80 p'r an	.....	Ordinary.....	Kept by contract with fishermen
4	Seal Island.....	1880	H. Hitchens...	7	250	\$	\$100 each per annum.	Beebe-McLellan boat on east side, surf-boat on west side.	375	Halifax.....	Full regulation	"
5	Atlantic Coast— Clark's Harbour ...	1900	J. M. Kenny,...	7	75	\$	\$1.50 per drill, extra when saving life.	Beebe-McLellan self-bailing, 25 feet long, low ends.	250	Shelburne, N.S..	"	Boat, house and gear cost \$700.
6	Blanche.....	1895	W. A. Smith....	7	75	"	"	Dobbin's pattern, self-righting and bailing, 25 feet long.	575	Dartmouth.....	"	"
7	Port Mouton.....	1889	J. Fransel....	7	75	"	"	"	575	"	"	"
8	Duncan's Cove.....	1886	J. Holland .....	7	75	"	"	"	575	"	"	Lyle gun established here, 1900.
9	Herring Cove. . .	1885	P. Gorman .....	7	75	"	"	"	575	"	"	"
10	Devil's Island . . .	1885	G. de Young....	7	75	"	"	"	575	"	"	"
11	Halifax .....	1900	.....	.....	.....	No crew here....	.....	"	375	"	Ordinary.....	This is a spare boat which can be used with volunteer crew when required.
12	White Head.....	1890	H. P. Munro....	7	75	\$	\$1.50 per drill, extra when saving life.	"	575	"	Full regulation	Lyle gun.
13	Sable Island... ..	1885	Supt. Humane Establishment.	.....	.....	Paid as island staff.	.....	Two Dobbin's self-righting and bailing boats and one Beebe-McLellan surf-boat, self-bailing.	1,100	Halifax, N.S.....	"	Lyle gun and rocket apparatus kept here.



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Life Saving Stations maintained by the Dominion Government—Concluded.

Number.	Stations.	Established.	Coxswain.	Crew.	Coxswain's Salary.	Per Annum.	Pay of Crew.	Description of Boat.	Cost.	Where Built.	Equipment.	Remarks.
14	Atlantic Coast— Scatterie Island .....	1885	F. Martell ..	7	\$	75	\$1.50 per drill, extra when sa- ving life.	Dobbin's pattern, 25 feet long, self-righting, and bailing.	\$	Dartmouth .....	Full regulation	
15	Gulf of St. Lawrence— St. Paul's Island .....	1885	Supt. Humane Establishment.				Paid as staff of Humane Esta- blishment.	Beebe-McLellan, self- bailing, 25 feet long, low ends.	250	Shelburne. . . .	Full equipment	Lyle gun added in 1900.
16	Picton Island .....		Alex. Currie ..	7	75	\$1.50 per drill, extra when sa- ving life.		Dobbin's pattern, self- righting and bailing, 25 feet long.	575	Dartmouth .....	"	
17	Cape Tormentine .....	1893	No organized crew.					Boats of winter mail ser- vice.		.....	Ordinary.....	
18	Great Lakes— Wellington .....	1882	"				\$1.50 per drill, extra when sa- ving life.	Dobbin's pattern, self- righting and bailing.	750	Buffalo, N.J. ....	Full equipment	Removed from Poplar Point in 1900.
19	Consecon .....	1898	W. A. Young...	7	75	"	"	"	750	"	"	Removed from Wellington in 1893.
20	Goderich .....	1882	D. Rooney .....	7	75	"	"	"	575	Goderich, Ont.	"	
21	Port Hope .....	1889	W. T. Clarke...	7	75	"	"	"	620	"	"	
22	Toronto Island .....	1883	Wm. Ward .....	7	75	"	"	"	600	"	"	New boat 1895.
23	Port Rowan .....	1883	R. Clark .....	7	75	"	"	Surf-boat .....	375	Buffalo, N.Y. ....	"	To be disconti- nued.
24	Port Stanley .....	1885	Wm. Berry .....	7	75	"	"	Dobbin's pattern, self- righting and bailing, 25 feet long.	575	Goderich, Ont.	"	Removed from Pelee Island in 1899.
25	Point Pelee .....	1900	W. A. Grubb, jr.	No crew yet.				"	575	"	"	
26	Goderich .....	1886	J. R. Craigie ..	7	75	\$1.50 per drill, extra when sa- ving life.	"	"	575	"	"	
27	Collingwood .....	1885	P. Doherty .....	7	75	"	"	Beebe-McLellan self- bailing surf-boat.	375	Collingwood .....	"	New boat in 1896.



APPENDIX No. II.

REPORT OF THE CHAIRMAN OF THE BOARD OF STEAMBOAT INSPECTION.

CHAIRMAN'S OFFICE,  
OTTAWA, November, 1900.

To the Honourable  
SIR LOUIS H. DAVIES,  
Minister of Marine and Fisheries,  
Ottawa.

SIR,—I have the honour to submit the annual report of the Steamboat Inspection service for the fiscal year ended June 30, 1900.

Said report contains the general work of the service during the period mentioned, showing the number of steamers inspected with their gross tonnage, and the amount of tonnage dues and fees collected on account of inspection, also a statement of the board meetings held, and the casualties occurring as reported from the several divisions.

In addition to the steamboats inspected, the hoisting gear and ships tackle of 441 vessels, used for the purpose of loading and unloading those vessels, was inspected by Mr. Louis Arpin, who was appointed principally for that purpose.

A.—NUMBER of steam vessels as reported by the Inspectors of Steamboats in the Dominion, and their gross tonnage, for the year ended June 30, 1900. Also the number of vessels inspected but not registered in the Dominion for same date.

Division.	Total number of Do- minion steamers.	Gross tonnage of Do- minion steamers.	Number of Steamers inspected but not registered in the Dominion.	Gross tonnage of steamers inspected but not registered in the Dominion.
West Ontario.....	381	72,463·00	28	15,425·00
Kingston.....	180	26,066·17	27	4,800·78
Montreal.....	217	22,656·41	1	3,005·59
Quebec.....	148	36,456·00	Nil	.....
Nova Scotia.....	121	23,860·76	18	21,973·35
New Brunswick and Prince Edward Island.....	132	15,540·57	9	5,604·63
British Columbia and Yukon Territory.....	185	40,382·17	32	37,587·20
Manitoba and North-west Territories.....	127	6,976·27	1	12·00
	1,491	244,401·35	116	88,408·55



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B.—NUMBER of Dominion registered steam vessels inspected and their gross tonnage ; with the amount of dues and fees collected on account of Steamboat Inspection, during the year ended June 30, 1900.

Division.	Number of Dominion registered steamers inspected.	Gross tonnage of Dominion registered steamers inspected.	Amount of dues and fees collected on account of steamboat inspection.
			\$ cts.
West Ontario.....	399	71,232·00	8,238 92
Kingston ... ..	170	26,440·10	3,202 95
Montreal .....	183	20,575·39	2,906 64
Quebec .....	159	36,792·60	3,784 16
Nova Scotia.....	109	21,435·54	4,174 92
New Brunswick and Prince Edward Island.....	124	14,127·05	2,336 20
British Columbia and Yukon Territory.....	174	30,400·76	7,610 17
Manitoba and North-west Territories.....	86	5,257·80	756 38
Inspecting tow barges.....			200 00
Engineers certificates.....			809 00
	1,305	226,170·64	31,029 34

C.—NUMBER of steam vessels added to the Dominion during the year ended June 30, 1900.

Division.	Number of vessels.	Gross tonnage.	Register tonnage.
West Ontario.....	20	1,167·93	703·54
Kingston .....	22	2,443·10	1,373·60
Montreal .....	8	406·69	138·02
Quebec ... ..	11	1,265·11	727·94
Nova Scotia.....	6	1,331·87	855 65
New Brunswick and Prince Edward Island....	2	58·75	41·55
British Columbia and Yukon Territory.....	28	3,764·82	2,295·86
Manitoba and North-west Territories.....	9	505·82	297·81
	106	10,944·09	6,432·98

BOARD MEETINGS.

A meeting of a quorum of the Board of Steamboat Inspection was convened at Toronto, January 18, 1900, being for the purpose of examining candidates for the position of steamboat boiler and machinery inspector, the vacancy existing owing to the retirement from the service of Mr. Jas. Johnston on account of his physical condition, "who was a very efficient officer," and whose retirement was deeply regretted. The members composing the Board, were Mr. John Dodds of Toronto, Mr. T. P. Thompson of Kingston, with the Chairman E. Adams of Ottawa. Mr. E. W. McKean of Hamilton passing a satisfactory examination, was recommended as qualified for the position, and was appointed thereto by order in council of February 22, 1900, with a salary of \$1,000 per annum.



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On account of the retirement from the service August 17, 1899, of Mr. W. A. Russell, at Vancouver, who held the position Steamboat inspector for British Columbia and Yukon Territory, in order to fill the appointment it was necessary to convene a meeting of the Board of Steamboat Inspection, for the purpose of examining candidates for the position.

The meeting was convened at Vancouver, April 2, 1900, the Board being composed of Mr. J. A. Thomson, and R. Collister of Victoria, B. C., with the Chairman, E. Adams, of Ottawa. Mr. Frank M. Richardson of Vancouver passing a satisfactory examination, was recommended for the position and appointed thereto by order in council of May 30, 1900, with a salary of \$1,200 pr annum.

It will be noticed from the foregoing, the incidental changes in the personnel of the staff of steamboat inspectors ; and in addition, is to be regretted the demise on June 16, 1900, of Mr. Alex. Horn, hull inspector at Kingston. In the meantime the work of that division has been conducted by Captain M. P. McElhinney, Dominion Hull Inspector at Ottawa, pending the inspection work of steamers permitting a meeting of the Board of Steamboat Inspection, for the examination of candidates for the position.

PROSECUTIONS WITH PENALTIES ENFORCED FOR VIOLATION OF THE STEAMBOAT  
INSPECTION ACT.

September 12, 1899.—Steamer *Oscar* of Victoria, B.C., certificated as a freight boat, was reported to the collector of customs at Victoria, as having violated the law by carrying passengers ; he investigated the matter which was proven as an infraction of section 42 of the Steamboat Inspection Act, and on communication with the Department of Marine, was advised to impose penalty amounting to \$101, which was paid by the owners, together with costs \$2.85, and was forwarded to the department by letter of September 15, 1899, with bank receipt for the amount of penalty inflicted.

October 23, 1899.—Steamer *Hudson* of Ottawa, was reported to the department as being engaged in carrying passengers without having a certificated captain or engineer on board. On communicating with the owners they acknowledged the charge, explaining the conditions under which it occurred, and pleading for leniency not wishing to be prosecuted for the infraction.

On consideration of the facts, they were informed by the department, if a sum of \$25 was deposited to the credit of the Receiver General on account of infraction of the laws, proceedings would not be taken, provided that the laws were immediately complied with, or stop running, to which the owners complied, by sending to the department with letter of November 5, 1899, the sum of \$25 and advising they had stopped running until the law could be complied with.

November 1, 1899.—Complaint was received by the department that the tug *Alfred Morell* of Owen Sound, had, on October 5, carried passengers from Parry Sound to Sturgeon Bay, not holding a passenger certificate for that purpose.

Proceedings were taken to inflict the penalty for so doing, and also, the penalty for not delivering to the collector of customs, a duplicate of the vessel's certificate of inspection.

The case was tried before the magistrate at Parry Sound, December 28, 1899 ; for neglect to file the certificate the defendant was found guilty, and minimum fine imposed. The witnesses not being forthcoming for the offence of carrying passengers when case was called, the magistrate dismissed the case against the defendants.

An appeal was made from the magistrate's dismissal of the case, which came up for hearing at the quarter sessions, February 6, 1900 ; the result of the appeal the magistrate's dismissal was set aside, and the defendant fined \$100 and costs.

The defendant also appealed to same court from the conviction for neglect to file the certificate which came on for hearing ; when the appeal was dismissed and the conviction sustained.

May 10, 1900.—The department was informed by telegram from collector of customs at Victoria, that the owners of the steamer *J. L. Card* had violated the Steamboat



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Inspection Act by carrying passengers, she not having at the time a passenger license, which was admitted by the owners and master, submitting to penalty to be imposed by the Honourable Minister of Marine and Fisheries.

He was advised to impose a nominal fine of \$100 which was paid by the master of the steamer, and a bank receipt for same was forwarded to the department by letter of May 14, 1900.

## CASUALTIES.

The following are the casualties reported from the several divisions as having occurred, for the fiscal year ending June 30, 1900.

*West Ontario Division.*

August 6, 1899—The G.T.R. car-ferry *Lansdowne* plying between Windsor and Detroit, Mich., collided with the U.S. steamer *H. B. Morley*; the *Morley* sank in mid-stream and the *Lansdowne* sank at the wharf; both vessels were raised and repaired.

August 10, 1899—In a dense fog, the steamer *Ontario* of Sarnia went ashore near Rossport on Lake Superior, the steamer went to pieces, and the boilers and machinery are being removed.

August 26, 1899—Steamer *Sir S. L. Tilley* of St. Catharines was burned near Fairport, Lake Erie; was afterwards repaired, and she is now named the *Advance* of Toronto.

October 18, 1899—The tug *Frank Reid* of Owen Sound ran ashore on Barrie Island, North Channel of Lake Huron, and became a total loss, the boiler and machinery being removed.

November 25, 1899—Steamer *Imperial* of Windsor was partially destroyed by fire at Amherstburg, Ont. Cause of fire unknown.

December 5, 1899—Steamer *Niagara* of St. Catharines on a voyage loaded with shingles from Parry Sound, Ont., for Tonawanda, N.Y., foundered near Long Point, Lake Erie. All the crew were lost.

December 14, 1899—Steamer *Erastus Wiman* of Toronto while lying at the wharf at Huntsville was totally destroyed by fire; the fire extended to the steamer *Sylvester* of Toronto, which was also totally destroyed. Cause of fire unknown.

*Kingston Division.*

May 5, 1899—Steamer *Mary Louise* at Lindsay whilst lying at her dock was partially destroyed by fire. Cause unknown.

August 4, 1899—At Stony Lake steam yacht *Tramp* was completely destroyed by fire. Cause unknown.

July, 1899—Steamer *Argyle* of Picton while on a voyage from Toronto, Ont., to Charlotte, N.Y., broke the cross-head of the engine, just outside of Charlotte; was towed into the harbour where repairs were made.

August 4, 1899—Steam yacht *Miltonia* whilst lying in her boat house at Milton Island was completely destroyed by fire. Cause unknown.

*Montreal Division.*

September 19, 1899—Steamer *Garnet* of Cornwall while leaving Lachine, broke her port shaft, was towed down the canal to Montreal, where replaced by a new one.

September 21, 1899—Steamer *Princess Louise* of Kingston while moored to the wharf at Noyan, caught fire and burnt, becoming a total loss. Cause of fire unknown.

May 17, 1900—Steamer *Paul Smith* of Montreal while fitting out in the canal at Lachine, was burnt during the night. Cause of fire unknown.

May 20, 1900—The tug *Kate* of Quebec while going into Ogdensburg Harbour broke her crank shaft. Cause, a flaw in the metal.



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*Quebec Division.*

August 27, 1899—The ferry steamer *Orleans* when nearing the wharf at Island of Orleans, touched a rock and broke one blade of her propeller; no other damage.

October 20, 1899—Steam tug *Daisy* of Quebec while lying at her wharf took on fire and was totally destroyed.

July 7, 1900—Steamer *Spartan* on coming down Lachine rapids in a storm got unmanageable and ran on a shoal, no damage was done, nor was there any fatalities.

*Nova Scotia Division.*

September 10, 1899—Steamer *Delta* of Halifax while on a voyage from Sydney to St. John's, Newfoundland, struck a sunken rock near Cape Race, and became a total loss. No loss of life.

January 9, 1900—Steamer *Rimouski* of Ottawa, on a voyage from St. John's, Newfoundland, to Halifax, ran aground near Lunenburg, N.S., and became a total loss. No loss of life.

*New Brunswick and Prince Edward Island Division.*

No casualties have occurred.

*Manitoba and North-west Territories.*

Steamer *Red River* of Winnipeg, while on a voyage from Selkirk to Norway House encountered a heavy gale on Lake Winnipeg, and sprang a leak, was towed by steamer *Lady of the Lake* to Georges Island Harbour, and grounded, where she still lies, is not yet known the amount of loss, or if total.

*British Columbia Division.*

July 12, 1899.—The passenger and freight stern-wheel steamer *Nahleen* of Victoria while fitting out for service on the Yukon River, was destroyed by fire during the night. A total loss. Cause of fire unknown.

September 16, 1899.—Steamer *Barbara Boscowitz* while loading at wharf on Skeena River, at falling tide caught on submerged ice breaker, careened over and filled; when tide came up was discharged and floated, and brought to Victoria where hauled out on marine ways. Damage: several planks, with portion of the keel carried away and vessel twisted two feet six inches, which was thoroughly repaired.

October 5, 1899.—Steamer *Tees* of Victoria on a voyage from Skagway to Victoria, struck on Eldred rock, Lyn Canal. The steamer having a double bottom was brought to Victoria and hauled out on marine slip; damage, several plates and frames broken, which were renewed and vessel put in thorough repair.

January 4, 1900.—Steam tug *Kaslo* laid up at Nelson, Kootenay Lake, no one known to be on board; caught fire, burning all deck-houses and one side of hull, machinery saved, the rest a total loss.

May 25, 1900.—Steamer *Danube* of Victoria, starting on a voyage to Skagway, stranded on Otter rock in Victoria Harbour, owing to the night being very dark, with dirty weather; the cargo was removed, vessel floated, and hauled out on marine ways; damage, four plates fractured, which were removed and vessel placed in thorough repair.

June 1, 1900.—Steamer *Trail* laid up at Robson, Columbia river, caught fire during the night, from spontaneous combustion of jute bagging, used to wipe up some paint oil and turpentine that had been spilled on deck; burned all above the main deck, and some of her deck beams and timbers; may save boilers, the rest a total loss.

I am, sir,

Your obedient servant,

EDWARD ADAMS,  
*Chairman, Board of Steamboat Inspection*



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## STEAM Vessels Inspected for the Year ended June 30, 1900.

## WEST ONTARIO DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
International.....		Not issued.	851	76 08	Twin screw, Sarnia and Port Huron.
Hiawatha.....	300.....	July 3..	163	21 04	Screw, St. Clair River.
J. C. Clark.....	283.....	" 4..	145	19 60	" "
Despatch.....	Fish'g tug.	" 4..	33	7 64	" Lake Huron.
John Lee, Sr.....	300.....	" 4..	88	12 04	" St. Clair River.
City of Dresden.....	100.....	" 5..	194	23 72	" Lake Erie.
Energy.....	Freight...	" 6..	116	14 28	" "
Scotia.....	40.....	" 6..	13	6 04	" Amherstburg and Bois Blanc Isl'd.
Ripple.....	Tug.....	" 10..	5	5 40	" Georgian Bay.
*Nautilus.....	"	" 17..	9	11 44	" Welland Canal.
Osprey.....	Fish'g tug.	" 18..	6	5 48	" Lake Erie.
Eleanor.....	"	" 18..	26	7 60	" "
*Wm. Wilson.....	"	" 18..	12	11 92	" "
Hazard.....	"	" 19..	34	7 72	" "
Lena.....	Yacht....	Not issued	14	6 12	" Long Point Bay.
Ivey, Alderson.....	Fish'g tug.	July 19..	39	8 12	" "
Ella.....	Yacht....	Not issued	15	6 20	" "
Majestic.....	400.....	July 22..	275	30 00	" Montreal and Burlington, Vt.
Germanic.....	500.....	April 26..	1014	89 12	" Collingwood and Sault St. Marie.
Gilphie.....	Yacht....	Aug. 1..	19	6 52	" Lake Huron.
Daisie.....	Tug.....	" 1..	11	5 88	" "
Winnie.....	Yacht....	" 2..	14	6 12	" "
Sea Shell.....	Tug.....	" 2..	7	5 56	" "
A. Chambers.....	Fish'g tug.	" 2..	23	6 84	" "
Welcome.....	"	" 2..	21	6 68	" "
Mary Amott.....	Tug.....	" 3..	8	5 64	" "
Earl.....	Fish'g tug.	" 3..	18	6 44	" "
Frank G. McAulay.....	"	" 3..	43	8 44	" "
John Logie.....	"	" 3..	29	7 32	" "
C. M. Bowman.....	Tug.....	" 4..	88	12 04	" "
Phoenix.....	"	" 4..	37	7 96	" "
Snowstorm.....	Fish'g tug.	" 16..	17	6 36	" Lake Erie.
Uncle Tom.....	"	" 17..	8	5 72	" "
Enterprise.....	"	" 17..	18	6 44	" "
Belle.....	"	" 18..	16	6 28	" "
Swan.....	"	" 18..	14	6 12	" "
A. V. Crawford.....	Tug.....	" 18..	51	9 08	" "
Ida Bell.....	Fish'g tug.	" 18..	6	5 48	" "
W. M. German.....	"	July 17..	28	7 24	" "
Mayflower.....	27.....	Sept. 4..	26	7 08	" Waubauskene & Point aux Barils.
Home Rule.....	Yacht....	" 4..	3	5 24	" Muskoka Mills and vicinity.
Stiletto.....	30.....	" 5..	14	6 12	" Waubauskene and Moose Point.
Gertie C.....	Tug.....	Not issued	15	6 20	" Georgian Bay.
Waubauskene.....	"	Sept. 5..	97	12 76	" "
J. C. Else.....	"	" 5..	33	7 64	Paddle "
Sweet Mary.....	"	" 6..	13	6 04	Screw "
Beaver.....	"	Not issued	29		" "
Margherita.....	Yacht....	"	31		" "
Great Western.....	200.....	Sept. 22..	1080	94 40	Paddle, Windsor and Detroit.
Lansdowne.....	200.....	" 25..	1571	133 68	" "
Ranger.....	Fish'g tug.	" 26..	8	5 64	Screw, Detroit River.
Monarch.....	330.....	" 20..	2017	169 36	" Windsor and Duluth..
Willie Scagel.....	Tug.....	Oct. 6..	22	6 76	" Wallaceburg and vicinity.
Ripple.....	"	" 6..	15	6 20	" " "
Harry Sewell.....	"	" 6..	25	7 00	" " "
Nina.....	"	" 7..	11	5 88	" " "
Arisdue.....	"	" 7..	38	8 04	" " "
City of Mt. Clemens...	Freight ..	" 7..	102	13 16	" " "
Frankie.....	Yacht....	" 7..	24	6 92	" " "

\* Dues and fees for 1898 and 1899.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Hattie Vinton.....	Tug.....	Oct. 14..	55	9 40	Screw, Soo and vicinity.
Siesta.....	Yacht....	Not issued	99		" "
W. A. Rooth.....	Tug.....	Oct. 16..	52	9 16	" "
Island Belle.....	Tug.....	Not issued	31	7 48	" Soo and vicinity.
Philadelphia.....	32.....	Oct. 17..	148	19 84	" Montreal and Duluth.
Susan C. Doty.....	Fish'g tug.	" 17..	26	7 08	" Soo and vicinity.
Camilla.....	100.....	" 18..	54	9 32	" Pointe aux Pins and Thessalon.
Bertha Endress.....		Not issued	32	7 56	" Michipicoten Harbour.
R. A. McLean.....	Tug.....	Oct. 21..	30	7 40	" Soo and vicinity.
Minnie M.....		Not issued	448	43 84	" "
Jas. McKeon.....	Tug.....	Oct. 24..	36	7 88	" Thessalon and vicinity.
Edgar P. Sawyer.....	".....	" 24..	52	9 16	" "
Alpha.....	".....	" 24..	34	7 72	" "
Stella.....	Fish'g tug.	" 26..	16	6 28	" Spanish River and vicinity.
P. S. Heisordt.....	Tug.....	" 26..	45	9 50	" " "
Fanny Arnold.....	25.....	" 26..	73	12 30	" Soo and Killarney,
Surprise.....	Fish'g tug.	" 27..	19	6 52	" " vicinity.
Scotch Thistle.....	30.....	" 27..	17	6 36	" Killarney and Algoma Mills.
John J. Long.....	65.....	" 27..	201	24 08	" Georgian Bay & Lake Huron ports.
Maggie May.....	40.....	" 28..	46	8 68	" Killarney and Thessalon.
Evangeline.....	Yacht....	" 28..	24	6 92	" Little Current and vicinity.
Georgia.....	Fish'g tug.	" 28..	28	7 24	" " "
Edwd. Blake.....	Tug.....	" 28..	22	6 76	" " "
Uncle Jim.....	Fish'g tug.	" 28..	11	5 88	" " "
Ethel.....	".....	" 28..	13	6 04	" " "
Creole.....	Tug.....	" 30..	21	6 68	" " "
Gertrude A. Ranney..	Fish'g tug.	" 30..	14	6 12	" " "
John Harrison.....	Tug.....	" 30..	44	8 52	" " "
Helen S.....		Not issued	86	11 88	" " "
Gordon Gauthier.....	Fish'g tug.	Oct. 16..	26	7 08	" Lake Superior.
Annie Clark.....	".....	" 16..	51	9 08	" " "
Genl. Weitzel.....	Tug.....	" 20..	32	7 56	" Soo and vicinity.
*Elite.....	10.....	Nov. 11..	22	13 52	" Cockburn Island and Killarney.
Huron.....	245.....	Sept. 25..	1,052	92 16	Twin screw, Windsor and Detroit.
Lakeside ... { Coasting 524..... } { Lake ... 349..... }		Nov. 29..	348	35 84	Screw, Lake Ontario.
		1901.			
Michigan.....	500.....	Mar. 20..	1,730	146 40	Paddle, Windsor and Detroit.
Ontario.....	500.....	" 20..	1,615	137 20	" " "
Charlton.....	Tug.....	April 11..	38 <sup>9</sup>	36 12	Screw, Lakes.
Danl. Lamb.....	Dredge...	" 14..	253	25 24	Toronto Bay.
Cuba.....	109.....	" 14..	931	82 48	Screw, Montreal and Toledo.
Melbourue ...	120.....	" 14..	894	79 52	" " "
Macassa.....	616.....	" 16..	459	44 72	Twin screw, Hamilton and Toronto.
Arabian.....	13.....	" 17..	1,073	93 84	Screw, Quebec and Montreal.
Lake Michigan.....	12.....	" 17..	573	53 84	" Montreal
Albert Wright.....	13.....	" 20..	29	7 32	" Little Current and Thessalon.
Ocean.....	125.....	" 21..	684	62 72	" Montreal and Sarnia.
Minnie M. { Coasting 561..... } { Lake ... 466..... }		" 23..	613	57 04	" Soo and vicinity.
Persia.....	150.....	" 25..	757	68 56	" Montreal and Hamilton.
Lincoln. { Coasting 498..... } { Lake ... 330..... }		" 25..	337	34 96	" Toronto and St. Catharines.
Jas. Norris.....	Tug.....	" 26..	50	9 00	" Soo and vicinity.
Augusta.....	".....	" 26..	57	9 56	" Welland Canal.
Heward McMaugh....	".....	" 26..	42	8 36	" " "
*Jessie L. McEdwards.	".....	" 27..	21	13 36	" " "

\*Dues and fees for 1899 and 1900.



STEAM Vessels Inspected, &c.—West Ontario Division—Continued.

BOILERS AND MACHINERY.—Continued.

Name of Vessel.	Numbers of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Garden City { Coasting 733..... } { Lake ... 500..... }		April 27..	637	59 04	Paddle, Lake Ontario.
Lillie Smith .....	Freight ..	" 30..	275	27 00	Screw, Montreal and Duluth.
United Empire .....	295. ....	" 30..	1,961	164 88	" Windsor "
Monarch .....	330. ....	" 30..	2,917	169 36	" " "
Saginaw .....	Tug... ..	May 1..	357	33 56	" Lakes.
Wales .....	" .....	" 1..	350	33 00	" "
Onaping .....	" .....	" 1..	256	25 48	" "
Juno .....	Freight...	" 1..	288	23 04	" Montreal and Duluth.
Home Rule .....	Tug... ..	" 1..	81	11 48	" Lakes.
Dominion .....	Freight...	" 2..	478	43 24	" Duluth and Prescott.
Imperial .....	220. ....	" 2..	150	20 00	" Sarnia and Sandusky.
Lurline .....	Yacht....	" 2..	66	10 28	" Lakes.
Mayflower. ....	900. ....	" 4..	189	23 12	Paddle, Toronto Bay.
Shamrock .....	383. ....	" 4..	154	20 32	" "
Primrose .....	900. ....	" 4..	189	23 12	" "
Arlington .....	100. ....	" 4..	23	6 84	Screw.
D. R. Van Allan .....	Freight ..	" 5..	318	30 44	" Duluth and Montreal.
Clark Bros .....	40. ....	" 7..	33	7 64	" Toronto Bay.
Toronto .....	1000. ....	" 8..	2779	230 32	Paddle, Toronto and Prescott.
A. J. Tymon .....	300. ....	" 9..	194	23 52	Screw, Lake Ontario.
Mary R .....	Tug... ..	" 10..	44	8 52	" Welland Canal.
Escort .....	" .....	" 10..	40	8 20	" "
Inez .....	" .....	" 10..	59	9 72	" "
A. D. Cross .....	" .....	" 11..	47	8 76	" "
Golden City .....	" .....	" 11..	35	7 80	" "
Chas. E. Armstrong .....	" .....	" 12..	49	8 92	" "
Ella Taylor .....	" .....	" 12..	34	7 72	" "
M. R. Mitchell .....	" .....	" 12..	40	8 20	" "
Nellie Bly .....	Fish'g tug	" 12..	13	6 04	" Lake Ontario.
Acacia .....	200. ....	" 15..	107	16 54	" Burlington Bay.
Modjeska .....	801. ....	" 15..	678	62 24	Twin screw, Hamilton and Toronto.
Owen .....	Freight ..	" 16..	103	13 24	Screw, Chatham and vicinity.
City of Chatham .....	580. ....	" 17..	341	35 28	" " and Detroit.
White Star { Coasting 705..... } { Lake ... 470..... }		" 22..	451	44 08	Paddle, Lake Ontario.
		1900.			
S. Kneeland .....	Tug.....	Dec. 31..	46	8 68	Screw, Toronto Bay.
		1901.			
Pittsburg .....	500. ....	June 9..	1349	115 92	Paddle, Soo to Cleveland.
* Evelyn .....	Fish'g tug	" 11..	32	15 12	Screw, Lake Huron.
* Huron .....	Tug ...	" 12..	55	18 80	" "
John R. Arnoldi .....	Dredge...	Not issued	116	14 28	Goderich Harbor.
* Geo. Swann .....	Fish'g tug	June 13	18	12 88	Screw, Lake Huron.
Maid of the Mist .....	80. ....	" 20..	62	9 96	" Niagara River.
Union .....	300. ....	" 20..	267	29 36	Paddle, Fort Erie to Buffalo.
Hope .....	300. ....	" 21..	170	21 60	Screw " "
Glenora .....	Fish'g tug.	Not issued	17	6 36	" Lake Erie.
Adrelexa .....	" .....	" .....	15	" .....	" "
Abino .....	40. ....	June 27..	8	5 64	" Niagara River.
Morning Star .....	Tug... ..	" 29..	5	5 40	" Toronto Bay.
M. A. Bennet .....	" .....	" 29..	34	7 72	" "
St. Andrew .....	10. ....	" 3..	1113	97 04	" Prescott and Duluth.
Total .....			38660	4041 42	

JOHN DODDS,  
Toronto.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1900.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Ontario.....	Tug.....	July 11...	11	5 88	Screw, Muskoka Lakes.
Bertha May.....	".....	" 11...	20	6 60	" "
Rosseau.....	".....	" 12...	53	9 24	" "
Flyer.....	17.....	" 12...	4	5 32	" "
Onagonah.....	20.....	" 13...	19	6 52	" "
Naiad.....	Yacht.....	" 13...	29	7 32	" "
Maple Leaf.....	".....	" 13...	12	5 96	" "
Ethel May.....	".....	" 14...	13	6 04	" "
Wapenae.....	".....	" 14...	5	5 40	" "
Wanda.....	".....	" 15...	12	5 96	" "
Secret.....	".....	" 15...	9	5 72	" "
Jennie Wilson.....	Tug.....	" 15...	7	5 56	" "
Nymoca.....	40.....	" 17...	25	7 00	" "
Lake Joseph.....	Tug.....	" 17...	28	7 24	" "
Wawonaissa.....	Yacht.....	" 17...	7	5 56	" "
Southwood.....	Tug.....	" 18...	19	6 52	" "
Kate Murray.....	".....	" 18...	3	5 24	" "
Gem.....	40.....	" 20...	9	5 72	Screw, Lakes at Huntsville.
Erastus Wiman.....	Tug.....	" 20...	54	9 32	" "
Lady of the Lakes.....	".....	" 21...	10	5 80	Screw, Lake of Bays.
Mary Louise.....	40.....	" 21...	64	10 12	" Portage Lake.
Florence.....	Tug.....	" 21...	27	7 16	" Lake of Bays.
Equal Rights.....	Yacht.....	" 21...	6	5 48	" "
Empress Victoria.....	100.....	" 22...	106	16 48	" Lakes at Huntsville.
Sylvester.....	Tug.....	" 22...	27	7 16	" " "
Conqueror.....	40.....	Aug. 15...	25	7 00	" Lakes Simcoe and Couchiching.
Enterprise.....	305.....	" 15...	148	19 84	" " "
Annie C. Hill.....	Yacht.....	" 16...	14	6 12	" " "
Queen.....	".....	Not issued	7		" " "
*Minota.....	".....	Aug. 17...	29	14 64	" " "
Agnes.....	25.....	" 17...	14	6 12	" Roaches Point to Belle Ewart.
Chub.....	Freight.....	Sept. 23...	57	9 56	" Lake Ontario.
Total.....			873	237 60	

\*Dues and fees for 1898-99.

JAS. JOHNSTON,  
Steamboat Inspector.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—West Ontario Division.—Continued.

BOILERS AND MACHINERY.—Continued.

Name of Vessels.	Number of Passen- gers allowed.	Date Certificate Expire.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Ada Alice.....	125.....	April 5..	60	9 80	Screw, Toronto Bay.
Algonquin.....	10.....	" 18..	1,806	152 48	" Prescott and Duluth.
Rosedale.....	10.....	" 18..	1,507	128 56	" " "
Minitaga.....	Tug.....	" 20..	73	10 84	" The Lakes.
Seguin.....	20.....	" 20..	818	73 44	" Prescott and Duluth.
Magnolia.....	Tug.....	" 20..	367	34 36	" The Lakes.
Metamora.....	".....	" 20..	239	24 12	" " "
D. L. White.....	".....	Not issued	56	9 48	" " "
Telegram.....	200.....	" "	198	23 84	" Lake Superior.
Bob Foote.....	Fish tug..	April 21..	39	8 12	" Georgian Bay.
Dalton McCarthy.....	" "	" 21..	54	9 32	" " "
John J. Long.....	65.....	" 21..	201	24 08	" Georgian Bay and Lake Huron.
Hugh S.....	Fish tug..	" 21..	24	6 92	" Georgian Bay.
Orcadia.....	" "	" 21..	26	7 08	" " "
Saucy Jim.....	Tug.....	" 23..	93	12 44	" " "
Severn.....	".....	" 23..	44	8 52	" " "
Dredge Dalt. McCarthy.....		Not regis tered.			
Lillie (of Hamilton)....	Tug.....	April 23..	50	9 00	" " "
City of Toronto.....	400.....	" 23..	782	70 56	Paddle, " "
Atlantic.....	300.....	" 23..	683	62 64	Screw, Collingwood & Sault Ste. Marie.
Majestic.....	763.....	" 24..	1,578	134 24	" Collingwood and Duluth.
City of Collingwood....	407.....	" 24..	1,387	118 96	" " "
City of Midland.....	375.....	" 24..	974	85 92	" Ports on all the Lakes.
City of Parry Sound....	280.....	" 24..	491	47 28	" Collingwood & Sault Ste. Marie.
Germanic.....	500.....	" 24..	1,014	89 12	" Ports on all the Lakes.
Britannic.....	277.....	" 24..	428	42 24	Paddle, Collingwood & Sault Ste. Marie.
Alberta.....	500.....	" 24..	2,282	190 56	Screw, Owen Sound and Fort William.
Athabasca.....	500.....	" 26..	2,269	189 52	" " " " "
Manitoba.....	500.....	" 26..	2,616	217 28	" " " " "
Erin.....	Freight....	" 25..	651	57 08	" Ports on all the Lakes.
Amenia.....	".....	" 26..	624	54 92	" " " "
Agnes.....	Tug.....	" 26..	23	6 84	" Georgian Bay.
Heather, Beil.....	Fish tug..	" 26..	20	5 60	" " "
Dolphin.....	Tug.....	" 27..	24	6 92	" " "
Thomas Maitland.....	".....	" 27..	107	13 48	" " "
Dredge No. 9.....	Dredge....	" 27..	187	19 96	Dredge, " "
Island Queen.....	149.....	" 28..	23	6 84	Screw, Toronto Bay.
Chicora.....	872.....	May 1..	931	82 48	Paddle, Lake Ontario.
Ongiara.....	244.....	" 1..	98	12 84	Screw, Lewiston, Queenston & Niagara on Lake.
Corona.....	1456.....	" 1..	1,274	109 92	Paddle, Lake Ontario.
C. W. Chamberlain....	Freight....	" 2..	385	35 80	Screw, Ports on all the Lakes.
Shawenaga.....	Tug.....	" 2..	96	12 68	" Georgian Bay.
Fred Davidson.....	".....	" 2..	43	8 44	" " "
Roy.....	Yacht....	" 2..	6	5 50	" " "
Masonic.....		Not issued	39	8 12	" " "
Lillie (of Toronto)....	Tug.....	May 3..	22	6 76	" " "
Superior.....	".....	" 3..	89	12 12	" The Lakes.
Waubushene.....	".....	" 4..	97	12 76	" Georgian Bay.
J. C. Else.....	".....	" 4..	33	7 64	Paddle, Waubushene and Port Severn.
Mayflower.....	27.....	" 4..	26	7 08	Screw, Waubushene and Pt.-aux-Baril.
Gertie C.....	Tug.....	Not issued	15	6 20	" Georgian Bay.
Voyageur.....	".....	May 4..	44	8 52	" " "
Rover.....	".....	" 4..	51	9 08	" " "
*Siesta.....	Yacht....	" 7..	3	10 48	" Muskoka Lake.
Chippewa.....	2000.....	" 9..	1,514	129 12	Paddle, Lake Ontario.
B. M. Fraser.....	Tug.....	" 10..	50	9 00	Screw, Georgian Bay.
Luella.....	125.....	" 11..	38	8 04	" Toronto Bay.
Cleopatra.....	Yacht....	" 14..	104	13 32	" Ports on all the Lake.
Hiawatha.....	".....	" 15..	46	8 68	" Toronto Bay.

\* Dues and fees for 1899 & 1900.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where Employed.
		1900.		\$ cts.	
Constance .....		Not issued	52	9 16	Screw, Muskoka Lakes.
J. V. O'Brien .....		" "	59	9 72	" Georgian Bay.
Annie, M. ....	Tug. ....	May 21..	33	7 64	" " "
Clinton .....	Freight...	Dec. 31..	430	39 40	" Montreal and Duluth.
		1901.			
Cambria.. { Lake. ....	400.....	May 23..	937	82 96	Paddle, Lake Ontario.
	{ Coasting... 600..... }				
Thistle.. ..	345.....	" 26..	78	11 24	" Toronto Bay.
*Signal. ....	Tug. ....	" 29..	94	37 56	Screw, Ports on all the Lakes.
†W. E. Gladstone .....	" .....	" 29..	59	19 44	" " "
Joe. Milton .....	200.....	" 30..	93	12 52	" Georgian Bay and Lake Huron.
J. H. Jones.....	35.....	" 31..	152	20 24	" " "
Port Elgin Queen.....	Tug. ....	" 31..	37	7 96	" Georgian Bay.
Oriole .....		Not issued	75	11 00	" Muskoka Lakes.
Medora.....		"	299	31 92	" "
Nipissing.....		"	275	30 00	Paddle "
Priscilla.....	Yacht....	June 13..	20	6 60	Screw "
Kenozha.....		Not issued	225	26 00	" "
Muskoka .....		"	197	23 76	" "
Bertha May .....	Tug. ....	June 13..	20	6 60	" "
Comet.....	" .....	Not issued	20		" "
Mink .....		"	56	9 48	" "
Ahmic.....		"	43	8 44	" "
Charlie M .....		"	50	9 00	" "
Queen of the Isles.....	Tug. ....	June 15..	40	8 20	" "
Nymoca .....		Not issued	25	7 00	" "
Gypsy.....	Tug. ....	June 16..	20	6 60	" "
Lorna Doone.....	40.....	" 18..	26	7 08	" Point aux Baril and Moose Point.
Geraldine.....	40.....	" 18..	65	10 28	" Penetanguishene and Pt. aux Baril.
Marie .....	Tug. ....	" 18..	12	6 04	" Georgian Bay.
Carlton .....	" .....	" 18..	8	5 72	" "
Bertha .....	36.....	" 19..	18	6 44	" Point aux Baril and Moose Point.
Alfred Morrell.....	Tug. ....	" 19..	40	8 76	" Georgian Bay.
W. S. Oldfield.....	" .....	" 19..	15	6 20	" "
Emma.....	150.....	" 19..	75	11 00	" Penetanguishene and Pt. aux Baril.
Edna.....	122.....	" 20..	55	9 40	" " "
Herold Gauthier.....	Fish'g tug	" 20..	9	5 72	" Georgian Bay.
Wanita.....		Not issued	44	8 52	" Magnetawan River.
Wenonah.....		"	161	20 88	" and paddle, Burks Falls and Ahmic Harbor.
Glenrosa.....	Tug. ....	June 22..	63	10 04	Screw, Burks Falls and Ahmic Harbour.
Emulator.....	" .....	" 22..	25	7 00	" " "
Van Woodland.. ..	102.....	" 23..	37	7 93	" Lakes Simcoe and Couchiching.
Ladysmith.....	26.....	" 23..	6	5 48	" " "
Longford.....	150.....	" 25..	53	9 24	" Barrie and Orillia.
Lorna Doone.....	Yacht....	" 25..	5	5 40	" Lakes Simcoe and Couchichng.
United Lumbermen...	Freight...	" 25..	399	36 92	" Montreal and Duluth.
Harney Neelon .....	Tug. ....	" 25..	65	10 20	" Georgian Bay.
Sea Gull.....	" .....	" 25..	9	5 72	" "
†Beaver .....	" .....	Not issued	29	14 64	" "
City Queen.....	180.....	June 26..	69	10 52	" Penetanguishene and Pt. aux Baril.
Stilletto .....	30.....	" 26..	14	6 12	" Waubaushe and Moose Point.
Home Rule .....	Yacht....	" 26..	3	5 24	" Penetanguishene and Moose Point.
Lillie May.....	Tug. ....	" 26..	10	5 80	" Georgian Bay.
John Lee, sr. { Lake .....	200.....	" 27..	88	12 04	" "
	{ Coasting 300..... }				
Mizpah.....	Yacht....	" 27..	18	6 44	" "
Maud .....	40.....	" 27..	40	8 20	" Penetang. and Pt. aux Baril, inside.
Mabel G.....	Yacht....	" 27..	10	5 80	" Georgian Bay.
Dorothe .....	" .....	" 28..	8	5 64	" "
Topsy .....	20.....	" 28..	9	5 72	" Penetang. Bay, inside of Island.
Total.....			31,699	3,230 54	

E. W. McKEAN, *Toronto.*



64 VICTORIA, A. 1901

STEAM Vessels Inspected in Canada but registered elsewhere, for the year ended  
June 30, 1900.

WEST ONTARIO DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900		\$ cts.	
Pennsylvania { Coasting Lake. . .	1,000 711 }	June 21..	747	67 76	Paddle, Ogdensburg to Duluth.
Chenango No. 1. . . . .		Not issued	1,942		Twin screw, Lake Erie.
Transfer. . . . .	233	Sept. 15..	1,511	128 88	Paddle, Windsor and Detroit.
Michigan Central . . . . .	300	" 18..	1,522	129 76	" " "
Transport. . . . .	256	" 20..	1,595	135 60	" " "
Wyandotte. . . . .	904	" 20..	320	33 60	Screw, Detroit River.
Fortune . . . . .	427	" 22..	200	24 00	" Windsor and Detroit.
Ariel. . . . .	226	" 23..	202	24 16	" " "
Victoria. . . . .	182	" 25..	192	23 36	" " "
Niagara . . . . .	150	" 30..	214	25 12	" Buffalo and Fort Erie.
Grace Dormer . . . . .	162	Oct. 3..	66	7 28	" Sarnia and Port Huron.
Omar D. Conger. . . . .	398	" 4..	347	35 76	" Detroit and St. Clair rivers.
Welcome. . . . .	266	" 6..	213	25 04	" Port Huron and Detroit.
Mascotte. . . . .	498	" 17..	162	20 96	Twinscrew, Pt. Iroquois and Thessalon.
International. . . . .	380	" 21..	144	19 52	Screw, Bay Mills and Thessalon.
City of Green Bay . . . . .	84	" 24..	257	28 56	" Sault St. Marie and Michipicoten Island.
		1901			
Tashmoo. . . . .	1,887	April 20..	1,344		Paddle, Lake Erie to Lake Huron.
City of Toledo. . . . .	1,120	" 20..	1,004		" Toledo to Southampton.
Promise . . . . .	1,000	May 1..	473		Screw, Lake Erie to Lake Huron.
Excelsior. . . . .	560	" 2..	229		" Detroit and Windsor.
Sappho . . . . .	700	" 2..	224		" Lake Erie to Lake Huron.
Arundell. . . . .		Not issued	339		" Detroit River.
Greyhound. . . . .	1,353	May 18..	621		Paddle, Sarnia to Toledo.
Idlewild. . . . .	800	June 5..	363		" " "
Pearl. . . . .	845	" 21..	552		" Buffalo and Pt. Colborne.
Pennsylvania { Coasting Lake. . .	1,000 711 }	" 21..	747		" Ogdensburg and Duluth.
Puritan . . . . .	725	" 22..	409		Twin screw, Buffalo and Crystal Beach
Gazelle. . . . .	512	" 22..	183		Screw " "
Anna F. Onen. . . . .	40	" 28..	50		" Niagara River.
Total. . . . .			16,172	729 36	

JOHN DODDS,  
Toronto.



## SESSIONAL PAPER No. 21

## STEAM Vessels not Inspected, &amp;c.—West Ontario Division.

## BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Kathleen .....	110	72	Screw, passenger,
Gertrude .....	76	51	" "
Queen City .....	312	209	" "
Odessa .....	12	8	" "
W. S. Ireland .....	105	71	" freight.
Maybird .....	46	32	" "
Meteor .....	337	181	Paddle, tug.
Luther Westover .....	127	80	" "
*Allena May .....	16	11	Screw "
John William .....	14	10	" "
Sea Gull .....	41	36	" "
Cecebe. . . . .	11	8	" "
L. Shickluna .....	16	11	" "
Clara Hickler .....	42	32	" "
W. L. Davis .....	46	34	" "
Electric .....	49	29	" yacht.
Sea Flower .....	7	5	" "
Abeona .....	46	31	" "
Sonntag .....	7	5	" "
Curlew .....	3	3	" "
A. M. Petrie .....	20	13	" "
*Viola .....	68	46	" "
Albani .....	5	4	" "
*Urania .....	898	424	Paddle, passenger.
*John Hanlan .....	37	25	Screw "
*Islay .....	175	119	" "
*Comfort .....	14	12	" "
*City of Windsor .....	511	316	" "
*Mazeppa .....	146	97	" "
LaBelle .....	75	58	" freight.
*A. H. Jennie .....	197	121	" "
E. Windsor .....	86	58	" "
T. J. Collop .....	63	42	" "
Herbert M. ....	21	18	" tug.
H. L. Lovering .....	55	38	" "
St. George .....	21	14	" "
Ocean Lily .....	3	2	" "
Iota .....	6	4	" "
Walter Scott .....	26	18	" "
Minnie Martin .....	10	7	" "
*G. P. McIntosh .....	58	41	" "
Islander .....	6	4	" "
Delight .....	26	14	" "
Agnes C .....	20	10	" "
Yacht Maida .....	2	2	" "
Tecumseh .....	10	6	" "
Huron Belle .....	27	18	" "
James Story .....	49	33	" "
*Reliance .....	311	182	" "
A. Seaman .....	76	52	" "
Rambler .....	6	4	" "
*Bruce .....	16	11	" "
Arbutus .....	49	34	" "
*Eagle .....	12	9	" "
*Sandford .....	56	38	" "
*Alert .....	47	32	" "
*Euna .....	6	4	" "
*Vick .....	13	9	" "
J. S. Blazier .....	89	60	" "
Herbert .....	21	10	" "
Sarah E. Day .....	5	4	" "

} Not running.

} No application.

\*Steamers marked thus inspected since June 30, 1900.



64 VICTORIA, A. 1901

STEAM Vessels not Inspected, &c.—West Ontario Division—*Concluded.*

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks.	
			Why not Inspected and Class of Vessel.	
Advance.....	72	49	Screw, fishing tug.	No application.
Shamrock .....	14	10	" "	
Vixen.....	68	53	" "	
*Evelyn.....	32	22	" "	
W. H. Siebold.....	22	15	" "	
*Sea King.....	26	17	" "	
Juno .....	28	19	" "	
Clucas.....	28	19	" "	
Sea Gull.....	19	13	" "	
Killarney Belle.....	28	19	" "	
M. G. McDonald.....	29	20	" "	
Cynthia.....	35	24	" "	
Mascott.....	21	14	" "	
James Playfair.....	26	18	" "	
Laura M.....	18	12	" "	
Fred. A. Hodgson.....	63	43	" "	
*Maud S.....	14	11	" "	
*Tepiakan.....	29	20	" "	
*Jubilee.....	10	7	" "	
Ida .....	21	6	" yacht.	
*Devenish.....	3	2	" "	
Halcro.....	8	5	" "	
*Una.....	22	15	" "	
Lillian.....	5	4	" "	

Steamers marked thus inspected since June 30, 1900.

JNO. DODDS, }  
E. W. McKEAN, } *Toronto.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, for the Year ended June 30, 1900.

## WEST ONTARIO DIVISION.

## HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900		\$ cts.	
Bertha.....	37.....	July 2..	18	6 44	Passenger, Parry Sound.
Carlton.....	26.....	" 3..	8	5 72	" "
Lorna Doone.....	38.....	" 3..	18	6 52	" "
Maud.....	40.....	" 4..	40	8 20	" Penetang.
Fred Davidson.....	125.....	" 4..	43	8 44	" "
Masonic.....	40.....	" 5..	39	8 12	" "
Odessa.....	30.....	" 5..	12	5 96	" Midland.
Queen City.....	328.....	" 8..	312	32 96	" Toronto.
Scow No. 1.....	100.....	" 10..	16	10 00	" "
J. C. Clark.....	283.....	" 14..	145	19 60	" Sarnia.
John Lee, Sr.....	300.....	" 15..	88	12 04	" Wallaceburg.
City of Chatham.....	580.....	" 16..	341	35 28	" Chatham and Detroit.
Scotia.....	40.....	" 17..	13	6 04	" Amherstburg.
City of Dresden.....	100.....	" 18..	194	23 52	" Windsor and Lake Erie ports.
Adrelexa.....	40.....	" 20..	15	6 20	" Point Abino.
Jubilee.....	40.....	" 20..	10	5 80	" Welland Canal.
Arlington.....	100.....	" 22..	23	6 84	" Toronto.
Conqueror.....	40.....	" 24..	25	7 00	" Lake Simcoe.
Enterprise.....	305.....	" 24..	148	19 84	" "
Islay.....	344.....	" 24..	175	22 00	" "
Longford.....	150.....	" 24..	53	9 24	" "
Stiletto.....	30.....	" 25..	14	6 12	" Waubauskene.
Mayflower.....	27.....	" 25..	26	7 08	" "
Germanic.....	500.....	May 1..	1,014	89 12	" All lakes.
Majestic.....	400.....	July 29..	275	30 00	" Richelieu River.
John Hanlan.....	100.....	Jan. 1..	37	7 96	" Toronto.
Ontario.....	Freight..	May 5..	655	57 40	Freight, All lakes.
Juno.....	"	Aug. 7..	288	*28 04	" "
Lillie Smith.....	"	" 14..	275	54 00	" "
Onaganoh.....	20.....	" 28..	19	6 52	Passenger, Muskoka Lakes.
Kenozhn.....	363.....	" 28..	225	26 60	" "
Mink.....	40.....	" 28..	56	9 48	" "
Charlie M.....	39.....	" 29..	50	9 00	" "
Oriole.....	97.....	" 29..	75	11 00	" "
Nipissing.....	394.....	" 30..	275	30 00	" "
Medora.....	416.....	" 30..	299	31 92	" "
Ahmic.....	40.....	" 31..	43	8 44	" "
Constance.....	40.....	Sept. 1..	42	8 36	" "
Flyer.....	17.....	Aug. 31..	4	5 32	" "
Gypsy.....	"	Not gra't'd	20	6 60	" "
Nymoca.....	40.....	Sept. 1..	25	7 00	" "
Muskoka.....	301.....	" 1..	197	23 76	" "
Mary Louise.....	40.....	" 2..	64	10 12	" Lake of Bays.
Empress Victoria.....	100.....	" 2..	106	16 48	" Huntsville.
Gem.....	40.....	" 2..	9	5 72	" Port Sydney.
Wanita.....	125.....	" 4..	44	8 52	" Burks Falls.
Wenonah.....	108.....	" 4..	161	20 88	" "
Geraldine.....	40.....	June 30..	65	10 28	" Parry Sound.
Agnes.....	25.....	Sept. 28..	14	6 12	" Lake Simcoe.
Lansdowne.....	200.....	Oct. 5..	1,571	133 68	" Windsor.
Great Western.....	200.....	" 5..	1,080	94 40	" "
Monarch.....	330.....	" 6..	2,017	169 36	" Windsor and Duluth.
Philadelphia.....	32.....	" 16..	148	19 84	" Sault St. Marie.
Camilla.....	100.....	" 18..	54	9 32	" "
Bertha Endress.....	"	Not gra't'd	32	7 56	" Michipicoten River.
Telegram.....	200.....	Oct. 14..	198	23 84	" Lake Superior.
Minnie M.....	"	Not gra't'd	448	43 84	" "
Fanny Arnold.....	25.....	Oct. 20..	73	12 30	" Spanish River.

\* Fees and dues for 1898 and 1899.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*

HULL INSPECTION—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900		\$ cts.	
City of Windsor .....	300. ....	Oct. 28..	511	48 88	Passenger, Owen Sound and Soo.
Scotch Thistle.....	30.....	" 27..	17	6 36	" Little Current.
Maggie May.....	40.....	" 28..	46	8 68	" "
Helen S.....	17.....	" 30..	86	11 88	" Collins Inlet.
Elite.....	10.....	Nov. 20..	22	6 76	" Gore Bay.
Huron.. .....	245.....	Oct. 5..	1,052	92 16	" Windsor.
		1901			
Lakeside .....	524.....	April 16..	348	35 84	" Lake Ontario.
Macassa.....	616.....	" 19..	459	44 72	" Toronto and Hamilton.
Arabian.....	13.....	" 19..	1,073	93 94	" All lakes.
Seguin .....	20.....	" 20..	818	73 44	" "
St. Andrew.....	10.....	" 20..	1,113	97 04	" "
John J. Long.....	65.....	" 21..	201	24 08	" Georgian Bay.
City of Toronto.....	400.....	" 23..	782	70 56	" "
Atlantic.....	300.....	" 23..	683	62 64	" Collingwood & Soo.
Germanic.....	500.....	" 23..	1,014	89 12	" " "
Britannic.....	277.....	" 24..	428	42 24	" " "
Majestic.....	638.....	" 24..	1,578	134 24	" " Duluth.
City of Collingwood...	407.....	" 24..	1,387	118 96	" " "
City of Midland.....	375.....	" 24..	974	85 92	" " Soo.
City of Parry Sound ..	280.....	" 24..	491	47 28	" " "
Alberta.....	500.....	" 24..	2,282	190 56	" Owen Sound & Duluth.
Erin .....		" 25..	651	57 08	Freight, all lakes.
Armenia.....		" 25..	624	54 92	" " "
Athabasca.....	500.....	" 26..	2,269	189 52	Passenger, Owen Sound & Fort William.
Manitoba, .. ..	500.....	" 26..	2,616	217 28	" " "
Persia.....	150.....	" 30..	757	68 56	" Montreal & Hamilton.
Chicora .....	872.....	" 30..	931	82 48	" Lake Ontario.
Algonquin.....	16.....	May 1..	1,806	152 48	" All lakes.
Rosedale .....	10.....	" 1..	1,507	128 56	" " "
C. W. Chamberlain.....		" 1..	385	35 80	Freight " "
Monarch.....	330.....	" 2..	2,017	169 36	Passenger, Windsor & Duluth.
Lillie Smith .....		" 2..	275	27 00	Freight, all lakes.
Hiawatha .....	300.....	" 2..	163	21 04	Passenger, Sarnia.
Comfort .. .....	40.....	" 3..	14	6 12	" Sombra.
Ontario.....	500.....	" 3..	1,615	137 20	" Windsor.
Imperial.....	220.....	" 3..	150	20 00	" Sarnia & Sandusky.
Michigan.....	500.....	" 4..	1,730	146 40	" Windsor.
Luella.....	125.....	" 5..	38	8 04	" Toronto.
Island Queen.....	140.....	" 5..	23	6 84	" " "
D. R. Van Allan.....		" 5..	318	30 44	Freight, Lake Ontario.
Ada Alice.....	125.....	" 5..	60	9 80	Passenger, Toronto.
		1900			
Minnie M. { Lake ...	466.... }	Oct. 30..	613	57 04	" Soo and Lake Superior..
Coasting..	561.... }				
		1901			
Cuba.....	109.....	May 9..	931	82 48	" Toledo and Montreal.
Primrose.....	900.....	" 10..	189	23 12	" Toronto.
Mayflower.....	900.....	" 10..	189	23 12	" "
Shamrock .....	383.....	" 10..	154	20 32	" "
Ocean .....	125.....	" 11..	684	62 72	" Montreal and Sarnia..
Garden City { Lake ...	500.... }	" 11..	637	59 04	" Lake Ontario.
Coasting	733.... }				
Lake Michigan.....	12.....	" 11..	573	53 84	" all lakes.
White Star { Lake ...	470.... }	" 16..	451	44 08	" Lake Ontario.
Coasting	705.... }				
Corona.....	1456.....	" 18..	1,274	109 92	" " "
Chippewa.....	2000.....	" 18..	1,514	129 12	" " "
Ongiara .....	244.....	" 18..	98	12 84	" Niagara River.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—West Ontario Division—*Concluded.*

HULL INSPECTION—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901		\$ cts.	
Clark Bros.....	66.....	May 19..	33	7 64	Passenger, Toronto.
Hope.....	300.....	" 22..	170	21 60	" Fort Erie.
Maid of the Mist.....	80.....	" 23..	62	9 96	" Niagara Falls.
Thistle.....	345.....	" 23..	78	11 24	" Toronto.
		1900			
Clinton.....		Sept. 20..	430	39 40	Freight, all lakes.
		1901			
Toronto.....	1000.....	May 26..	2,779	230 32	Passenger, Lake Ontario.
Melbourne..	120.....	" 26..	894	79 52	" Toledo and Montreal.
Acacia.....	200.....	" 28..	107	16 54	" Hamilton.
Modjeska.....	801.....	" 28..	678	62 24	" " Toronto.
A. J. Tymon { Lake Coast..	300..... } 448..... }	June 11..	194	23 52	" Lake Ontario.
Buller.....	17.....	May 30..		10 00	" Stratford Creek.
Union.....	300.....	" 22..	267	29 36	" Fort Erie.
Cambria { Lake Coasting....	400..... } 600..... }	June 11..	937	82 96	" Lake Ontario.
Lincoln { Lake Coasting....	330..... } 498..... }	" 11..	337	34 96	" Toronto and St. Catherines.
United Lumberman....		" 12..	399	31 92	Freight, all Lakes.
		1900			
Albert Wright.....	13.....	Oct. 30..	29	7 32	Passenger, Little Current.
		1901			
Joe Milton.....	200.....	June 14..	93	12 52	" Georgian Bay.
Mazeppa.....	300.....	" 16..	146	19 68	" Owen Sound.
J. H. Jones.....	35.....	" 15..	152	20 24	" Georgian Bay.
Vanwoodland.....	102.....	July 16..	37	7 96	" Lake Simcoe.
Lady Smith.....	26.....	" 24..	6	5 48	" "
Geraldine.....	40.....	June 22..	65	10 28	" Parry Sound.
Einma.....	150.....	" 22..	75	11 00	" "
Julian V. O'Brien....	Not granted...		59	9 72	" Byng Inlet.
Bertha.....	36.....	June 22..	18	6 44	" Parry Sound.
Lorna Doone.....	40.....	" 23..	26	7 08	" "
Edna.....	122.....	" 23..	55	9 40	" "
Pittsburg.....	500.....	" 27..	1,349	115 92	" Sault Ste. Marie and Cleveland.
Urania.....	500.....	" 29..	898	79 84	" Lake Erie.
United Empire.....	295.....	May 5..	1,961	164 88	" Windsor and Duluth.

WM. EVANS,  
*Hull Inspector.*



64 VICTORIA, A. 1901

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1900.

WEST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Sappho.....	700	Aug. 7..	224	25 92	Passenger, Detroit.
Excelsior.....	560	" 8..	229	26 32	" "
Victoria.....	182	" 8..	192	33 36	" "
Fortune.....	427	" 8	200	24 00	" "
Primrose.....	1,000	" 9..	473	45 84	" "
Idlewild.....	800	" 9..	363	37 07	" Toledo and Port Huron.
Darius Cole.....	1,088	" 9..	538	51 06	" Lake Erie and Lake Huron.
City of Toledo.....	1,120	" 10..	1004	88 31	" Toledo and Southampton.
Ariel...."	226	" 10..	202	24 16	" Detroit.
Wyandotte.....	904	" 10	320	33 60	" Detroit and Sugar Island.
Transfer.....	233	" 11..	1511	128 88	" Detroit.
Transport.....	256	" 11..	1595	135 60	" "
Michigan Central.....	300	" 11..	1522	129 76	" "
Greyhound.....	1,353	" 12..	621	57 70	" between Lakes Erie and Huron
James Beard. ..	66	" 12..	87	8 96	" Sarnia.
Omar D. Conger.....	398	" 14..	347	35 76	" between Lakes Erie and Huron
Grace Dormer.....	162	" 14..	66	7 28	" Sarnia.
Welcome.....	266	" 14..	213	25 04	" Port Huron and Detroit.
Louise.. ..	154	" 15..	84	11 64	" Lake Erie.
Gazelle.....	512	" 17..	183	22 64	" Crystal Beach.
Pearl.....	845	" 17..	552	52 16	" "
Puritan.....	725	" 17..	409	40 72	" "
Pennsylvania.....	{ Lake 711 } { Coast 1,000 }	" 18..	747	67 76	" Ogdensburg and Duluth.
Niagara .....	150	Sept. 30..	214	25 12	" Fort Erie.
Mascotte.....	498	Oct. 17..	162	20 96	" Sault St. Marie
International....	380	" 21..	144	19 52	" "
City of Green Bay....	84	" 24..	257	28 56	" Lake Superior.

WM. EVANS,  
Hull Inspector.

STEAM Vessels not Inspected for the Year ended June 30, 1900.

WEST ONTARIO DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not inspected and class of vessel.
Myles.. ..	1,199	742	No application.
Kathleen. ....	110	72	"
Odessa.....	12	8	"
Abino. ....	8	5	"
Dominion.....	478	304	"

WM. EVANS,  
Hull Inspector.



## SESSIONAL PAPER No. 21

## STEAM Vessels Inspected for the Year ended June 30, 1900.

## EAST ONTARIO DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
C. Here.....	25.....	July 4...	7.40	5 56	Screw, Trenton and Prescott.
Miltonia.....		" 5...	32.18	7 56	" Pleasure yacht.
Wattli.....		" 6...	18.11	6 44	" "
Iona.....	15.....	" 11...	231.53	26 56	" Freight, Lake and River.
Eclipse.....	100.....	" 12...	17.94	6 44	" Rice Lake.
Rainbow.....	40.....	" 12...	25.92	7 08	" "
City of Peterborough..	300.....	" 13...	287.60	31 04	Paddle, "
Beaver.....	75.....	" 13...	18.00	6 44	Screw, "
North Star.....	165.....	" 14...	39.60	8 20	" "
Estelle.....			8.23		" Naptha, Pleasure Yacht.
Majestic.....	185.....	July 15...	67.77	10 44	" Cos. Vict. and Peterboro.
Mollie.....		" 17...	10.72	5 88	" Pleasure yacht.
Sunbeam.....	210.....	" 17...	104.92	16 40	" Cos. Vict. and Peterboro.
Lorlie.....		" 18...	5.88	5 48	" Pleasure yacht.
Idle Hour.....		" 18...	2.40	5 16	" Tug Cos. Vict. and Peterboro.
Alice Ethel.....	190.....	" 19...	71.75	10 76	Paddle, Cos. Vict. and Peterboro.
Express.....	20.....	" 19...	3.90	5 32	Screw, Scugog Lake and River.
Crandella.....	400.....	" 20...	266.20	29 28	Paddle, Cos. Vict. and Peterboro.
Waterwitch.....		" 20...	9.20	5 72	Screw, Tug, Lindsay Waters.
Maple Leaf.....	70.....	" 21...	26.08	7 08	" Cos. Vict. and Peterboro.
Marie Louise.....	40.....	" 21...	39.02	8 12	" " "
Victoria.....			3.90	5 32	" Pleasure yacht.
Comet.....	35.....	July 22...	7.60	5 64	" Cos. Vict. and Peterboro.
Greyhound.....	40.....	" 22...	37.35	7 96	" " "
Esturion.....	297.....	" 24...	139.39	19 12	Paddle, " "
India.....		April 15...	976.49	83 08	Screw, Freight, all lakes.
Undine.....	22.....	July 26...	13.81	6 12	" Cos. Vict. and Peterboro.
Beaver.....		" 26...	91.50	12 32	Paddle, Tug, " "
Calumet.....		" 27...	21.87	6 76	Screw, Pleasure yacht.
Beaubocage.....	150.....	" 27...	129.00	18 32	Paddle, Cos. Vict. and Peterboro.
Lady of the Lake.....	40.....	" 27...	32.95	7 64	Screw, " "
Nouna Roy.....		" 28...	4.14	5 32	" Pleasure yacht.
Dawn.....		" 28...	20.20	6 60	" Tug, Lindsay Waters.
Minnie May.....		" 29...	10.20	5 80	Paddle, Tug, Balsam Lake.
Jeunniac.....			4.68		Screw, Naptha, Pleasure Yacht.
Empress.....	200.....	July 31...	84.48	11.72	" Cos. Vict. and Peterboro.
Tramp.....	10.....		2.24	5 16	" " "
Lenore.....		August 1..	8.13	5 64	" Tug, " "
Flash.....	10.....		4.74	5 40	" " "
Dickson.....			16.01	6 28	Paddle, Alligator, "
Mayflower.....			5.99	5 48	Screw, Pleasure Yacht.
Wanda.....	15.....	June 1...	38.61	8 12	" Trenton and Prescott.
Leone.....	10.....	" 20...	2.48	5 16	" Kingston "
H. F. Bronson.....		April 15..	*	5 00	T. S., River St. Lawrence.
Jopl.....	40.....	August 10.	10.54	5 88	Screw, Kingston and Prescott.
Florence.....		" 15...	3.08	5 24	" Pleasure Yacht.
Mary Ellen.....		" 18...	20.22	6 60	" Tug, Canal and River.
Ivy.....	30.....	" 18...	7.43	5 56	" Cornwall and Lake St. Francis.
Princess Louise.....	100.....	" 19...	26.36	7 08	" Screw, Kingston and Montreal.
C. F. Dunbar.....		" 19...	32.86	7 64	" Tug, Canal and River.
Vesta.....	10.....	" 20...	7.80	5 64	" Trenton and Prescott.
Sandy.....		" 22...	29.57	7 32	" Tug, Canal and River.
Montmorency.....		" 22...	17.81	6 44	" " " "
W. J. Poupore.....		" 22...	46.54	8 76	" " " "
Grenada.....	175.....	" 23...	57.00	9 16	" Kingston and Montreal.
Stranger.....		" 23...	49.58		" Tug, Canal and River.
Gacie.....	40.....	" 23...	10.50		Paddle, Messena and Valleyfield.
Deslisle.....			45.00		Screw, Tug, Public Works.
Dredge Queen.....			100.00		Spoon Dredge, "
Helen.....			1.82	5 16	Screw, Kingston and Prescott.

\* Second inspection.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—East Ontario Division—*Continued.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Dredge D. Stewart		Sept. 5	295.21	28 60	Spoon Dredge, Canal.
Meubria		" 6	42.98	8 44	Screw, Tug, Canal and River.
John Hunter		" 6	32.14	7 56	Screw, Tug, Canal and River.
Dredge Killarney					Spoon dredge, Canal.
" Kilkenny					" " "
Myra		Aug. 31	73.21	10 84	Screw, Tug, River St. Lawrence.
Dredge St. Lawrence		Sept. 11	258.10	25 64	Spoon dredge, Canal.
Mona		" 12	24.87	7 00	Screw, Tug, Canal and River.
Wm. Davis		" 12	40.23	8 20	" " "
Dredge Ottawa		" 13	219.95	22 60	Spoon dredge Canal.
Mary		" 1	61.52	9 88	Screw, Tug, River St. Lawrence.
A. B. Cooke		" 1	34.17	7 72	" " "
Dredge Ottomac			195.65	20 68	Elevator dredge, Canal.
Beaver		" 1	40.88	8 28	Screw, Tug, River St. Lawrence.
Alaska		" 1	48.74	8 92	" " "
Hubert Larkin		" 1	48.73	8 92	" " "
D. P. Dey		" 1	11.26	5 88	" " "
Dredge No. 4		" 21	175.41	19 03	Spoon dredge, Canal.
Kilbernie		" 20	15.23	6 20	Screw, Pleasure yacht.
Nellie	20	" 20	6.82	5 56	" Kingston and Ottawa.
Commodore	25	" 20	3.06	5 24	" Carleton Place and Innesville.
Lillian, B.	15	" 20	3.76		" " "
Aberdeen	40	" 20	12.65	6 04	" Kingston and Ottawa.
Eva Belle	10		10.10		" " "
Fearless		" 1	46.38	8 68	" River St. Lawrence.
Prince Edward	Ferry	Oct. 11	18.22	6 44	Centr. Pdle. Tyendinaga & Sophiasberg
Dredge Ontario			116.00		Spoon dredge, Public Works.
Tropic	15	Sept. 20	8.86	5 72	Screw, Kingston and Ottawa.
St. Paul			45.00		" Tug, Public Works.
		1901.			
Pierrepont	115	April 4	251.98	28 16	Paddle, Trenton and Prescott.
Tecumseh		" 7	839.67	72 20	Screw, Prescott and Duluth.
Hero	475	" 7	342.12	35 36	Paddle, Trenton and Montreal.
Ruth		" 9	36.45	7 88	Screw, Tug, River St. Lawrence.
Bannockburn	10	" 9	1619.56	137 60	" all lakes and rivers.
Ella Ross	300	" 10	324.88	34 00	Paddle, Brighton and Prescott.
Nile		" 10	96.30	12 68	Screw, Freight, Canal and River.
Reliance	25	" 11	239.14	27 12	T. S., all lakes and rivers.
Desoronto	85	" 11	54.57	9 40	Screw, Trenton and Prescott.
Resolute	25	" 11	371.86	37 76	T. S., all lakes and rivers.
Rescue	25	" 12	52.29	9 16	Screw, Trenton and Prescott.
Ranger	25	" 12	13.83	6 12	" " " Picton.
Rosemount	10	" 13	1580.37	134 40	" all lakes and rivers.
Glengarry		" 13	732.41	63 56	Screw, Freight, all lakes and rivers.
H. F. Bronson		" 13	137.12	15 96	T. S. Tug, River St. Lawrence.
Chieftain		" 14	434.68	39 80	Paddle, Tug, " "
India		" 14	976.49	83 08	Screw, Freight, all lakes and rivers.
Parthena		" 14	198.13	20 84	Paddle, Tug, River St. Lawrence.
Bothnia		" 16	883.36	71 64	Screw, Freight, all lakes and rivers.
Wm. Johnston		" 16	94.72	12 60	" Tug, River St. Lawrence.
D. D. Calvin, B.		" 16	749.53	65 00	" Freight, all lakes and rivers.
Myles		" 17	1198.50	100 92	" " " "
Hector		" 17	20.64	6 68	" Tug, River St. Lawrence.
Aberdeen		" 18	141.86	16 36	" Freight, Lake and River.
Alexandria	600	" 19	863.15	77 04	Paddle, Charlotte and Montreal.
Glide		" 20	77.90	11 24	Screw, Tug, River St. Lawrence.
Orion		" 20	846.43	72 68	" Freight, all lakes and rivers.
Saturn	15	" 20	883.09	78 64	" " " "
North King	525	" 21	872.95	77 84	Pdle, L. Ontario and R. St. Lawrence.
Active		" 21	301.70	29 16	Screw, Tug, R. St. Lawrence.
King Ben		" 23	145.36	16 60	" Freight, River St. Lawrence.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected &c.—East Ontario Division—*Concluded.*

BOILERS AND MACHINERY —*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
James Swift.....	125	April 23..	265·92	29 28	Screw, Kingston and Ottawa.
Reginald .....		" 24..	186·26	19 88	" tug, Lake and River.
David G. Thomson.....		" 24..	185·05	19 80	" tug, St. Lawrence River.
Frank Jackman .....		" 25..	38·90	8 12	" " "
Jessie Hall. ....		" 27..	56·54	9 56	" " "
Valeria.....	135	" 30..	51·55	9 16	" Trenton and Prescott.
Jubilee.....	140	" 30..	53·94	9 32	" Morrisburg and Waddington.
America.....	698	May 1..	520·53	52 24	Paddle, Trenton and Montreal.
John Milne.....		" 2..	108·53	13 72	Screw, freight, Lake and River.
Rival.....		" 3..	125 14	15 00	Paddle, tug, St. Lawrence River.
Dredge Nipissing.....			100·00		Spoon dredge, Public Works.
Where Now.....		May 12..	47·78	8 84	Screw, pleasure yacht.
C. H. Merritt.....	350	" 18..	121·58	17 76	" Brighton and Prescott.
Armenia.....	200	" 19..	109·99	16 80	" Trenton & Dickinson's Land'g
St. Louis.....			22·54	6 84	" pleasure yacht.
Annie Lake.....	38	May 20..	18·52	6 52	" Brighton and Prescott.
Madge.....		" 20..	9·49	5 72	" pleasure yacht.
Jessie Fordward.....	25	" 20..	5·64	5 48	" Trenton and Prescott.
Skylark.....		" 20..	43·29	8 44	" pleasure yacht.
Kismet.....		" 20..	5·42	5 40	" " "
Carmana.....		" 20..	56·08	9 48	" " "
Argyle.....	750	" 20..	700·29	64 00	Paddle, Toronto and Prescott.
Reindeer.....	160	" 20..	58·29	9 64	Screw, " "
Varuna .....	240	" 20..	134·04	18 72	" Brighton and Prescott.
Donnelly.....	300	June 4..	318·91	30 52	Paddle " "
Edmond.....		" 4..	39·10	8 12	Screw, tug, canal and river.
Blue Bell.....		" 7..	11·97	5 96	" pleasure yacht.
Dorothy.....	30		10·09		" Trenton and Prescott.
Dredge No. 5.....		May 4..	100·00	13 00	Spoon dredge, canal.
Mary A. Laughlin .....		" 4..	22·62	6 84	Screw, tug, St. Lawrence River.
Mabel.....		June 11..	11·24	5 88	" " "
Dredge Central City.....		" 11..	223·62	22 89	Spoon dredge, canal.
Dredge No. 4.....		" 11..	175·41	19 03	" " "
" I. X. L. ....		" 12..	100·00	13 00	" " "
Dredge Sir Hector.....		" 12..	355·39	34 40	" " "
Rideau Queen .....	300	" 13..	350·75	36 08	Screw, Kingston and Montreal.
Alberta.....		" 14..	122·43	14 76	" freight, St. Lawrence River.
Soucié.....		" 15..	13·84	6 12	" pleasure yacht.
City of Belleville.....	250	" 19..	101·17	16 08	" Kingston and Prescott.
Lee .....		" 19..	8·73	5 72	" plasure yacht.
Albani .....		" 19..	57·83	9 64	" " "
Brockville.....	375	" 20..	190·75	23 28	" Kingston and Cornwall.
Illecellewait .....		" 21..	15·69	6 28	" pleasure yacht.
Kenneth.....		" 21..	4·11	5 32	" " "
Antelope.....	40	" 20..	24·98	7 60	" Trenton and Prescott.
Dortha.....		" 22..	50·98	9 08	" pleasure yacht.
Corrella.....	18	" 20..	3·81	5 32	" Kingston and Prescott.
International.....	150	" 20..	395·31	39 60	" Prescott and Ogdensburg.
Naiad.....		" 28..	15·41	6 20	" pleasure yacht.
Leone.....	25	" 20..	4·26	5 32	" Kingston and Prescott.
Total.....			26,440 10	2,931 51	

THOS. P. THOMPSON



64 VICTORIA, A. 1901

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended  
June 30, 1900.

## EAST ONTARIO DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Pas- senger allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Ins- pection Fees Paid.	Class of Vessels and where employed.
		1900.		\$ cts.	
Sirius.....	46	July 4..	17·80	6 44	Screw, Kingston and Ft. Covington.
Columbia.....	40	" 11..	26·20	7 08	" Trenton and Ft. Covington.
Algona.....	290	Aug. 16..	92·06	12 36	" Cape Vincent and Ft. Covington.
Henry Plumb.....	237	June 20..	92·78	12 44	" Kingston and Cornwall.
Empire State.....			1,116·53	97 36	" Duluth and Prescott.
Spry.....	25	Aug. 25..	4·39	5 32	" Kingston and Ogdensburg.
Ariel.....	17	" 25..	7·74	5 56	" " "
Gen'l. W. B. Franklin.	25	" 26..	11·35	5 88	" " "
Claude S.....	25	" 26..	15·55	6 28	" " "
Nettie.....	25	" 26..	11·02	5 88	" " "
Badger State.....	404	Sep. 1..	1,115·52	97 28	" Duluth and Prescott.
Nightingale.....	100	" 23..	56·76	9 56	" Trenton and Ft. Covington.
		1901.			
Jessie Bain.....	150	April 4..	44·37	Exempt	" Kingston and Ogdensburg.
New Island Wanderer.	400	" 21..	123·00	"	" " "
St. Lawrence.....	645	May 14..	312·90	"	Paddle, Kingston and Montreal.
Empire State.....	800	" 17..	379·74	"	" Lake Ont. & Riv. St. Lawrence.
New York.....	730	" 18..	294·87	"	" Kingston and Montreal.
Islander.....	416	June 2..	118·61	"	" Kingston and Prescott.
Valetta.....	40		27·84	"	Screw, Kingston and Ogdensburg.
Henry Plumb.....	240	June 20..	92·78	"	" Kingston and Cornwall.
Outing.....	25	" 20..	15·87	"	" Trenton and Morrisburg.
Unique.....	460	" 20..	381·00	"	" " "
Massena.....	250	" 20..	89·67	"	" Kingston and Morrisburg.
Island Bell.....	335	" 20..	89·77	"	" Kingston and Prescott.
Cresco.....	65	" 20..	62·00	"	" Kingston and Cornwall.
Wm. Armstrong.....	25	" 20..	181·24	"	" Prescott and Morrisburg.
Milton.....	45	" 20..	19·42	"	" Trenton and Montreal.
Total.....			4,800·78	271 44	

THOS. P. THOMPSON.



SESSIONAL PAPER No. 21

STEAM Vessels not Inspected for the year ended June 30, 1900.

EAST ONTARIO DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	REMARKS.
			Why not Inspected and Class of Vessel.
Dolce.....	4.74	3.22	Screw, passenger.—No application.
Pilgrim.....	262.49	165.37	Paddle, " "
Rescue.....	7.23	4.92	Screw, " "
Caribou.....	144.19	97.49	" " "
Mary Ethel.....	98.61	56.13	Paddle, " "
Startled Fawn.....	25.49	17.34	Screw, " "
Mildred.....	4.50	3.06	" Yacht "
Anna ..	7.89	6.49	" Tug "
Transit.....	140.81	92.93	Twin screw, passenger "
Marinora.....	12.96	8.82	Screw, " "
Mabel C.....	4.48	3.36	" Yacht "
Thistle.....	36.02	24.50	" Fishing tug "
Curlew.....	8.55	5.81	" Passenger "
Ingomar.....	22.48	2.90	" Yacht "
	780.44	492.34	

THOS. P. THOMPSON.

STEAM Vessels Inspected for the Year ended June 30, 1900.

MONTREAL DIVISION

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Massawippi .....		July 1..	4.00	5 32	Screw passenger, Lake Massawippi.
*Monaco.....		" 12..	9.69	11 60	" pleasure yacht, St. Lawrence R.
R. B. Flower.....		" 12..	14.77	6 20	" tug, St. Lawrence River.
Adonis.....		" 13..	13.99	6 12	" pleasure yacht, Richelieu Riv.
Alexandria .....		" 13..	53.00	9 24	" " "
Weslunkoon .....		" 17..	17.00	6 36	Paddle tug, Madawaska River.
Hudson .....	75	" 17..	45.00	8 60	" passenger "
Thistle .....	10	" 17..	2.18	5 16	Screw " "
River Belle.....		" 17..	14.14	6 12	" tug "
Mahigma.....	40	" 18..	20.00	6 60	" pass., Pembroke & Ft. William
Chance.....		" 19..	5.02	5 40	" pleasure yacht, Ottawa River.
Chummy.....		" 19..	5.37	5 40	" tug "
Thistle.....		" 19..	4.86	5 40	" pleasure yacht "
Mildred .....	25	" 20..	15.22	6 20	" passenger, Lièvres River.
Aid .....		" 20..	25.26	7 00	Paddle tug, Ottawa River.
Nokomis.....		" 20..	25.02	7 00	Screw yacht "
Wenoway.....	40	Aug. 3..	98.96	12 92	Paddle passenger, Quinze Lake.
Ballantyne.....		" 3..	13.82	6 12	" tug "
Quinze .....		" 3..	32.46	7 56	Screw " "
Meteor.....	350	" 4..	299.43	31 92	" pass., Temiscamingue Lake..
F. W. Avery.....		" 7..	14.04	6 12	Paddle tug, Ostoboning Lake.

\* Dues and fees for 1897 and 1899.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—Montreal Division—*Continued.*BOILERS AND MACHINERY — *Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and where employed.
		1900.		\$ cts.	
D. A. Martin.....	40	Aug. 7..	77.60	11 24	Screw passenger, North River.
R. Hurdman.....	40	" 7..	93.12	12 44	" " Kippewa Lake.
C. E. Read.....		" 7..	12.56	6 04	Paddle tug "
Charlotte.....	30	" 8..	13.86	6 12	Screw passenger "
Otter.....		" 8..	21.16	6 68	Paddle tug "
North River.....		" 8..	22.00	6 76	" " "
Dora..	25	" 9..	48.32	8 84	Screw pass., Temiscamingue Lake.
Clyde.....	60	" 9..	29.16	7 32	" " "
Argo..	75	" 9..	154.06	17 32	Paddle " "
Beaver.....		" 11..	13.09	6 04	" tug "
Mink.....		" 11..	13.82	6 12	" " "
Richelieu.....	40	" 14..	33.67	7 72	Screw passenger, Richelieu River.
Tiber.....	80	" 18..	1735.86	146 88	" pass. and freight, Gulf Ports.
Tit Willow.....		Dec. 30, '99	16.83	6 36	" pleasure yacht, Ottawa River.
Virginia.....		Aug. 25..	145.96	16 60	" tug, St. Lawrence River.
Mathilda.....		" 25..	114.00	14 12	" " "
Hiram Robinson.....		Dec. 1, '99	60.90	9 88	" " Upper Ottawa River.
Conqueror.....		" 31, '99	233.04	23 64	Paddle " St. Lawrence River.
Monarque.....		Sept. 20..	136.41	15 88	" " "
Alcyone.....		" 25..	38.44	8 04	Screw pleasure yacht, St. Lawrence R.
W. Ross.....		Oct. 13..	14.19	6 12	" tug "
Wild Rose.....		" 20..	9.97	5 80	" pleasure yacht "
		1901.			
Hochelaga.....	300	April 6..	418.95	41 52	Paddle ferry, Montreal & Boucherville
Cultivateur.....	751	" 6..	362.00	36 96	" " " St. Helen's Id
Hebron.....		" 18..	148.97	16 92	Screw freight, Lakes and Rivers.
McNaughton.....		" 24..	137.19	15 96	" tug, St. Lawrence River.
Virginia.....		" 24..	145.96	16 60	" " "
Florence.....		" 24..	112.94	14 04	" " "
Mathilda.....		" 24..	113.66	14 12	" " "
Eagle.....	30	" 25..	12.74	6 04	" passenger, Yamaska River.
E. H. Bronson.....		" 26..	285.22	27 80	Paddle tug, Upper Ottawa.
Alex. Fraser.....		" 26..	320.20	30 60	" " "
Pembroke.....		" 26..	194.21	20 52	" " "
D. B. Mulligan.....	40	" 26..	76.69	11 16	Screw ferry, Pembroke and Desjardins
C. B. Powell.....		" 27..	272.34	26 76	Paddle tug, Upper Ottawa River.
Victoria.....	40	" 27..	187.58	23 04	" pass., Pembroke & Desjardins
Mahigona.....	40	" 27..	19.91	6 60	Screw " " Ft. William
Dolphin.....		" 28..	69.66	10 60	" tug, Ottawa River.
Sir Hector.....		" 28..	39.72	8 20	" " "
Florence.....		" 28..	61.53	9 96	" " "
G. H. Harris.....		April 28..	87.46	11 96	Screw, tug, Ottawa River.
G. H. Notter.....		" 28..	14.00	6 12	" " "
Harry Bate.....	40	" 30..	253.71	28 32	" " and Montreal.
Olive.....	60	" 30..	213.00	25 04	" " "
Welshman.....	25	" 30..	155.73	20 48	" " "
Hall.....	50	" 30..	246.92	27 76	" " "
Bonito.....	30	May 1..	17.35	6 36	" ferry, Calumet and L'Orignal.
Ida.....	140	" 1..	247.26	27 76	" pass., frt. Ottawa & Montreal.
Rockland.....		" 1..	77.56	11 24	" tug, Ottawa River.
Victoria.....	300	" 1..	181.43	22 48	" pass., Ottawa and Thurso.
Charlemagne.....		" 2..	76.38	11 08	" " St. Lawrence River.
Duchess of York.....	700	" 2..	489.74	47 20	Paddle " Montreal and Carillon.
Princess.....	443	" 2..	526.82	50 16	" " " "
Chateauguay.....	40	" 2..	222.27	25 76	" " " Chateauguay.
Iona.....		" 3..	231.53	26 56	Screw, freight, Lake Ontario.
W. F. McRea.....		" 3..	45.73	8 68	" tug, Rivers and Canals.
Nana.....		" 3..	41.86	8 36	" pleasure yacht, St. Lawrence R.
Brothers.....	375	" 8..	545.50	51 68	Paddle, pass., Montreal and Berthier.
Filgate.....	275	" 8..	425.00	42 00	" " " Cornwall.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Montreal Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Sovereign.....	700	May 10..	637·29	58 96	Paddle, pass, Montreal and Carillon.
E. B. Eddy.....		" 16..	78·44	11 24	Screw, tug, St. Lawrence River.
Richelieu.....	100	" 16..	113·38	17 04	Paddle, pass., Montreal & Valleyfield
Empress.....	800	" 17..	677·60	62 16	" " Ottawa and Grenville.
Hamilton.....		" 17..	319·88	30 60	" tug, Chats Lake.
Samson.....		" 17..	15·27	6 20	" " "
J. L. Murphy.....		" 18..	173·05	18 84	Screw " "
Amable du Fond.....		" 18..	17·40	6 36	Paddle " "
Madawaska.....		" 18..	14·57	6 20	" " "
G. B. Green.....	600	" 19..	254·81	28 40	" pass., Deschesnes Lake.
G. B. Pattee.....		" 19..	30·38	7 40	Screw, tug " "
Albert.....		" 19..	216·98	22 36	Paddle " " "
Beatrice B.....	40	" 21..	58·63	9 72	Screw, ferry, Ottawa and Hull.
Marquis of Lorne.....	40	" 21..	20·19	6 60	" " " "
E. G. Laverdure.....		" 21..	54·00	9 32	" tug, Ottawa River.
Ada.....		" 21..	28·52	7 24	" " "
Juno.....		" 22..	17·09	6 36	" pleasure yacht, Deschesne Lake
Col. By.....		" 22..	9·31	5 72	" tug, Rideau Canal.
Tit Willow.....		" 22..	16·83	6 36	" pleasure yacht, Ottawa River.
Mildred.....	25	" 23..	15·22	6 20	" pass., Lièvres River.
Agnes.....	40	" 23..	29·37	7 32	" " "
Leon.....	20	" 23..	14·57	6 20	" " "
T. Osborne.....		" 24..	24·97	7 00	" tug, Ottawa River.
Glyde.....	40	" 24..	80·48	11 40	" pass., Calumet & Hawkesbury
Robineault.....	200	" 26..	332·07	34 56	" " Montreal and Valleyfield.
British Lion.....		June 2..	25·43	7 00	" tug, Ottawa & St. Lawrence R.
*Willie C.....		" 2..	8·23	11 28	" " Chateauguay River.
Dredge No. 4.....		" 2..	100·00	13 00	Dredge, " "
*Cygne.....		" 4..	12·02	11 92	Screw, pleasure yacht, St. Lawrence.
Garnet.....	200	" 5..	152·05	20 16	Paddle, pass., Montreal & Valleyfield.
Maude.....	350	" 6..	269·23	29 52	" " " Ottawa.
Archie Stewart.....		" 7..	79·62	11 40	Screw, tug, Ottawa River.
Sparrow.....	40	" 12..	38·17	8 04	" pass., Lake Nipissing.
Dauntless.....	20	" 12..	7·93	5 64	" " "
Queen.....	40	" 12..	15·37	6 20	" " "
Booth.....	25	" 12..	346·55	32 76	Paddle " "
Ladas.....	40	" 13..	54·47	9 32	Screw " "
Nosbonsing.....		" 13..	24·53	7 00	" tug, Nosbonsing Lake.
Zephyr.....		" 13..	2·78	5 24	" " Lake Nipissing.
Empress.....		" 14..	35·57	7 88	" " "
Shoofly.....		" 14..	9·99	5 80	" " "
Turtle.....		" 14..	33·12	7 64	Paddle " "
Verva.....	40	" 15..	55·54	9 40	Screw, tug, pass., Wahnapiatae Lake.
Maid of the Mill.....	20	" 15..	8·18	5 64	" " " "
River Belle.....		" 16..	14·14	6 12	" " Madawaska River.
Hudson.....	75	" 18..	44·81	8 60	Paddle, pas., Barrys Bay & Combermere
Thistle.....	10	" 18..	2·18	5 16	Screw " " "
Minnie Bell.....		" 19..	21·74	6 76	" " Rideau Canal.
Emile.....		Not issued	11·80	5 96	" " Ottawa and vicinity.
Mansfield.....	40	June 22..	169·06	21 52	" ferry, Ottawa & Gatineau Pt.
John.....	30	" 23..	35·17	7 80	Paddle, ferry, Carillon & Pt Fortune.
Robert Anglin.....		" 25..	97·18	12 76	Screw, freight, Ottawa and vicinity.
Laurier.....	40	" 29..	18·66	6 52	" pass., Montreal and Vaudreuil
Total.....			15,792·79	2,020 52	

WM. LAURIE,  
Montreal.



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the Year ended June 30, 1900.

MONTREAL DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Ins- pection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Maggie R. King . . . . .		Aug. 16..	27·13	7 16	Screw, tug, canals.
Tim Doyle.....		" 23..	14·84	6 20	" "
Derrick No. 1... . . . .		Nov. 2..	100·00	13 00	Derrick, Montreal harbour.
		1901.			
Derrick No. 4... . . . .		April 12..	100·00	13 00	Derrick, Montreal harbour.
Derrick No. 5.....		" 12..	100·00	13 00	" "
Dredge No. 1.....		" 12..	100·00	13 00	Dredge "
Dredge No. 3... . . . .		" 14..	100·00	13 00	" "
Drill Boat.....		" 16..	100·00	13 00	Drill "
Derrick No. 6.....		" 17..	100·00	13 00	Derrick "
St. Louis.....		" 20..	34·00	7 72	Screw, tug "
Derrick No. 2.....		" 20..	100·00	13 00	Derrick "
Dredge Trenton.....		" 21..	100·00	13 00	Dredge, rivers.
Aurelia.....		" 21..	32·05	7 56	Screw, tug, rivers.
Aberdeen.....		" 23..	86·58	11 96	" "
Plover.....		" 25..	40·30	8 20	" canals.
Dredge No. 2.....		" 26..	100·00	13 00	Dredge, Montreal harbour.
Dredge No. 4.....		" 27..	100·00	13 00	" rivers.
Dredge No. 6.....		" 27..	100·00	13 00	" "
Ida.....		" 28..	26·41	7 08	Screw, tug, canals.
Mabel Macdonald.....		" 28..	41·81	8 36	" rivers.
Lucia.....		" 30..	41·07	8 28	" canals.
St. Peter.....		May 3..	43·00	8 44	" rivers.
Antelope.....		" 8..	82·84	11 64	" "
Kate.....		" 9..	61·07	9 88	" "
Windermere.....		" 10..	31·17	7 48	Screw, yacht, rivers.
St. George.....		" 11..	67·85	10 44	" tug, rivers.
H. Larosée.....		" 28..	12·69	6 04	" " canals.
Robert Stoker.....		June 4..	13·72	6 12	" " "
Elevator No. 2.....		" 5..	170·00	18 60	" grain elevator, Montreal harb'r.
Elevator No. 10.....		" 5..	173·00	18 84	" " "
Elevator No. 7.....		" 5..	170·00	18 60	" " "
Elevator No. 14.....		" 6..	181·00	19 48	" " "
Elevator No. 4.....		" 6..	188·00	20 04	" " "
Elevator No. 6.....		" 6..	170·00	18 60	" " "
Elevator No. 1.....		" 7..	165·00	18 20	" " "
Elevator No. 9.....		" 7..	172·00	18 76	" " "
Elevator No. 11.....		" 8..	169·00	18 52	" " "
Elevator No. 12.....		" 8..	183·00	19 64	" " "
Elevator No. 15.....		" 8..	212·60	22 04	" " "
Elevator No. 16.....		" 8..	210·31	21 80	" " "
Elevator No. 8.....		" 9..	80·00	11 40	" " "
Elevator No. 13.....		" 9..	178·00	19 24	" " "
Elevator St. Lawrence No. 1.....		" 9..	83·00	11 64	" " "
* Agnes McMahon.....			81·48	11 48	
† Agnes McMahon.....		June 11..	54·00	9 32	" tug, canals.
Elevator No. 5.....		" 13..	80·00	11 40	" grain elevator, Montreal harb'r.
Shickluna.....		" 15..	66·00	10 28	" tug, canals.
Courier.....		" 16..	12·48	5 96	" " harbour.
Dama.....	40	" 16..	54·58	9 40	" passenger, Montreal & Quebec.
C. W. Dennis.....		" 18..	16·91	6 35	" tug, canals.
Nellie Reid.....		" 26..	55·71	9 48	" " rivers.
Total.....			4,782·60	637 64	

\* "Dues" and "Fees" paid for 1899 on old tonnage.  
† "Dues" and "Fees" paid for 1900 on new tonnage.

LOUIS ARPIN,  
Steamboat Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but Registered elsewhere for the Year ended  
June 30, 1900.

MONTREAL DIVISION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
S. S. Symra .....	.....	May 14..	3,005·59	248 48	Screw, freight, Gulf Ports.

WM. LAURIE, Montreal.

STEAM Vessels not inspected for the Year ended June 30, 1900.

MONTREAL DIVISION.

Name of Vessel.	Gross Tonnage.	Register'd Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
High Rock.....	8·00	5·00	Screw, tug, not running.
Gertie.....	17·05	8·97	" " "
Vesper.....	7·93	5·39	" yacht "
Mattawa.....	22·43	15·25	" pass. "
Lottie.....	10·04	8·52	" " "
H. M. Mixer....	30·00	9·00	" tug "
Hurtubise.....	46·12	42·52	" " "
Frank Perew.....	43·02	23·86	" " "
John Thompson.....	5·16	4·11	" yacht "
H. Trudel.....	13·38	5·65	Paddle, wharf tug "
Nora .....	28·13	19·13	Screw, tug "
Eileen .....	11·00	9·00	" " "
Thurso.....	20·07	9·09	Paddle, ferry "
Union.....	75·04	66·05	Screw " "
Clipper.....	4·00	3·00	" pass. "
Flora .....	5·18	3·96	" " "
Janet Craig .....	11·73	5·91	" " "
St. Michael.....	15·65	9·87	Paddle, tug "
Vesta... ..	14·17	7·56	Screw, yacht "
Elsie Ross .....	9·83	7·76	" tug "
Temiscamingue .....	412·89	236·22	Paddle, pass. "
Jeanne.....	16·12	6·28	Screw, yacht "
Little Roxy.....	11·67	6·88	" pass. "
Bonechere .....	13·00	6·00	Paddle, tug "
Owl .....	3·69	2·51	Screw, pass. "
Dredge No. 6 .....	100·00	.....	Dredge, no application.
Dredge No. 7 .....	100·00	.....	" " "
Ishaway.....	6·76	4·66	Screw, yacht "
Lady of the Lake .....	607·00	369·00	Paddle, pass., not running.
Frolic .....	15·72	10·29	Screw, yacht "
Napierville.....	165·44	112·50	Paddle, ferry "
Annie C.....	6·33	4·30	Screw, pass. "
Bonenfant.....	21·34	11·96	" ferry, undergoing repairs.
John A.....	19·70	13·40	" tug, no application.
Prefontaine .....	433·83	295·11	" freight "
White Squall.....	7·47	5·08	" yacht "
Chaffey.....	42·44	29·31	" pass. "
Russell .....	76·49	44·50	" tug "
Chipmunk .....	37·00	25·00	" yacht "
W. P. Buckley.....	26·83	12·49	" tug "
Winona .....	12·00	8·93	" " "
Total .....	2,533·65	1,474·02	

WM. LAURIE,  
LOUIS ARPIN, Montreal.



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the Year ended December 31, 1900.

QUEBEC DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.		Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.			\$ cts.	
Beaver .....	Crew of 9	July	11..	273	26 84	Paddle, tug, Quebec and Montreal.
Fairy.....	" 2	"	12..	9	5 72	Screw, Quebec Harbour, tug.
L'Ami.....	" 2	"	25..	16	6 28	" tug on Lake Aylmer.
Campania .....	" 2	"	26..	23	6 84	" " Megantic.
Macanamac.....	" 1	"	26..	4	5 32	" pleasure yacht, Spider Lake.
Jubilee.....	30	"	26..	25	7 00	" passenger, Lake Megantic.
Tese.....	" 1	"	26..	5	5 40	" pleasure yacht "
Dauntless .....	" 10	Aug.	1..	81	11 48	" tug, Montreal and Gulf.
Amanda.....	" 2	"	3..	11	5 88	" Quebec Harbour, tug.
Queen.....	450	"	4..	367	37 36	" winter ferry, Quebec and Lévis.
Batiscan.....	" 4	"	5..	40	8 20	Paddle, tug, Batiscan River & Quebec.
Bell.....	" 5	"	7..	51	9 08	Screw, tug, Saguenay River.
Kinogami .....	" 3	"	8..	21	6 68	" " "
Le Colon.....	40	"	9..	173	21 84	Paddle, pass., Roberval and Mistasini.
Arthur.....	" 2	"	10..	15	6 20	Screw, tug, Lake St. John.
Paribonka.....	40	"	10..	179	22 32	Paddle " "
Undine .....	" 2	"	9..	17	6 36	Screw " "
Forest.....	" 3	"	8..	26	7 08	" " Saguenay River.
Marie Louise.....	40	"	10..	99	12 92	Paddle, tug, Ste. Anne & Chicoutimi.
Thor.....	" 10	"	10..	323	30 84	" Saguenay River.
Pierre Ville.....	" 4	"	18..	42	8 36	" Yamaska.
Johana B.....	" 2	"	21..	17	6 36	Screw, Harbour, tug.
Robert McKay .....	" 8	Sept.	14..	129	15 32	" Montreal Harbour, tug.
Frontenac.....	555	"	8..	304	32 32	Twin screw, ferry, Que. & St. Romuald
Fearless.....	" 2	"	25..	10	5 80	Screw, tug, Pabos River.
Christina.....	" 4	"	26..	57	9 56	Paddle, tug, Restigouche River.
Frances.....	40	"	26..	19	6 52	" ferry, Campbellton & Cross Pt.
Oak Bay .....	" 3	"	27..	27	7 16	" tug, Restigouche River.
Maggie A.....	" 2	"	27..	5	5 40	Screw, tug "
Le Brochu.....	" 2	"	28..	19	6 52	" Lake Metapedia.
Hubert.....	" 2	"	29..	5	5 40	Paddle, tug, Lake Salmon.
Swallow.....	" 2	"	12..	9	5 72	Screw, tug, Lake Edward.
Randolph .....	" 2	"	2..	17	6 36	" Quebec Harbour, tug.
Fabiola .....	" 10	May	11..	81	11 48	" steam wrecking schooner.
		1901.				
Rhoda.....	156	May	1..	182	22 56	Paddle, mail tender, Rimouski.
St. Olaf .....	130	"	1..	305	32 40	Screw, freight & pass., Quebec & Sydney
Campana.....	400	"	1..	1,697	143 76	Twin screw, pass., Montreal & Quebec
Champion .....	612	"	1..	482	46 56	Paddle, pass., Quebec and Berthier.
Frontenac.....	555	"	1..	304	32 32	Twin screw, ferry, Que. & St. Romuald
Orleans .....	530	"	12..	269	29 52	Screw, ferry, Quebec & Island Orleans
North.....	450	"	15..	289	31 12	Paddle, ferry, Quebec and Lévis.
South.....	450	"	15..	349	35 92	" " "
Charlevoix.....	75	"	15..	212	24 96	Screw, pass., Quebec & Murray Bay.
S. voy.....	25	"	15..	348	35 84	" freight & pass., Que. & Anticosti
Lord Stanley.....	30	"	15..	276	30 08	Twin screw, wrecking steamer in Gulf.
Alice.....	" .....	"	10..	67	10 36	Screw, Montreal Harbour, tug.
Asilda.....	" 4	"	15..	23	6 81	" " "
Dandy .....	" 5	"	19..	46	8 68	" " "
Ethel.....	" 8	"	19..	72	10 76	" " "
Julia.....	" 8	"	20..	91	12 28	" " "
W. F. Loggie .....	" .....	"	20..	17	6 36	" " "
T. H. Nasmith.....	" .....	"	20..	49	8 92	" " "
W. C. Francis.....	" .....	"	23..	37	7 96	" " "
Spray .....	" .....	"	23..	107	13 56	Montreal and Quebec, tug.
Sencennes.....	" .....	"	26..	228	23 24	Paddle, tug, Montreal and Quebec.
Hudson .....	" .....	"	27..	158	17 64	" " "
Berthier.....	600	"	17..	934	82 72	" pass., Three Rivers & Montreal.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Quebec Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Hosana .....	185	May 17..	84	11 72	Screw, pass., St. Helen's Id. & Montreal
John Pratt .....	Crew of 9	" 20..	Public Works.		
Honoré .....	" 3	" 20..	22	6 76	Screw, Sorel and Montreal, tug.
Fire Fly .....	" 40	" 1..	214	25 12	Paddle, pass., Sorel and Berthier.
Carolina .....	600	" 1..	977	86 16	" " Montreal & Chicoutimi
Chambly .....	600	May 15..	535	50 80	Paddle, pass., Montreal and Chambly.
Canada .....	600	" 15..	1,768	149 44	" " " Chicoutimi.
Longeuil .....	300	" 15..	365	37 20	" " ferry, Montreal and Longeuil.
Laprairie .....	350	" 15..	600	56 00	Paddle, pass. ferry, Montreal and Laprairie.
Montreal .....	800	" 15..	2,068	173 44	Paddle, pass., Montreal and Quebec.
Terrebonne .....	450	" 15..	636	58 88	" " " Contrecoeur.
Saguenay .....	443	" 15..	992	87 36	" " Quebec and Chicoutimi.
Sorel .....	40	" 15..	158	20 64	" " Sorel and Montreal.
Daisy .....	Crew.				Department of Public Works.
Richard .....	" of 6	May 3..	466	45 28	Screw, freight, Montreal and lakes.
St. Francis .....					Dept. Public Works, attending dredge
St. James .....					Department of Public Works.
St. Jean Iberville .....					" "
Sensation .....					" "
Eureka .....					" " Channel.
Victoria .....	30	May 18..	196	23 68	Screw, frt., Montreal and Chambly.
Dredge No. 4 .....	Crew.	April 30..		5 00	Elevator Dredge.
Polino .....	" of 25	May 8..	807	72 56	Screw, freight, Montreal and St. John, N.F.
Cartier .....					Owned by Dept. of Public Works, attending dredge.
St. Louis .....	514	May 15..	428	42 24	Paddle, pass., Montreal and Quebec.
Ingomar .....	Crew of 2	" 15..	22	6 76	Screw, Quebec Harbour, pleasure yacht
Algerian .....	400	" 15..	914	81 12	Paddle, pass., Montreal and Toronto.
Hamilton .....	375	" 15..	938	83 04	" " "
St. Antoine .....	Crew of 3	" 15..	14	6 12	Screw, pleasure yacht.
Etoile .....	591	" 15..	560	52 80	Paddle, pass., Montreal and Quebec.
St. Croix .....	550	" 15..	506	48 48	" " "
Lillie H. ....	Crew of 3	" 25..	19	6 52	Screw, Quebec Harbour, tug.
Alaska .....	" 2	" 1..	51	9 08	" " barge.
Shamrock .....					Dept. of Marine, laying of buoys.
Fabiola .....	Crew of 9	May 15..	81	11 48	Screw, wrecking schooner, Gulf St. Lawrence.
Florence .....	" 9	" 15..	133	15 64	Screw, wrecking schooner, Gulf St. Lawrence.
Columbian .....	400	" 16..	704	64 32	Twin screw excursion steamer.
Corsican .....	400	" 16..	946	83 68	Paddle, pass., Montreal and Toronto.
Caspian .....	400	" 16..	968	85 44	" " "
Quebec .....	800	" 17..	2,656	220 48	" " Quebec.
Bohemian .....	375	June 2..	628	58 24	" " Prescott.
Greetland .....	40	May 22..	1,091	95 28	Screw, Montreal and foreign ports.
Ivan R. ....	40	" 23..	18	6 44	" pass., Grand Piles & La Tuque.
Florence .....	Crew.	" 24..	18	6 44	" tug, " "
High Rock .....					Return of fee not received, E. O. Hector notified.
St. Maurice .....	Crew.	May 24..	45	8 60	Screw, tug, Grand Piles & La Tuque.
Swallow .....	"	" 27..	9	5 72	" " Lake Edward.
Grace .....	"	" 27..	4	5 32	" pleasure yacht, Lake Edward.
Rivière du Loup .....	40	June 2..	199	23 92	Paddle, pass., Three Rivers and Cape Magdalen.
Spartan .....	400	May 31..	946	83 68	Paddle, pass., Montreal and Toronto.
Island Queen .....	250	" 31..	98	12 84	Screw, pass., Three Rivers & Batiscan.
Trois Rivières .....	1,161	June 1..	1,552	132 16	Paddle, " Montreal and St. Anne.
Two Brothers .....	Crew of 2	" 4..	23	6 84	Screw, Quebec Harbour, tug.
Diver .....	" 9	" 4..	86	11 88	" steam wrecking schooner, Gulf and river.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—Quebec Division—*Concluded.*BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Kathleen. ....		June 7..			Agricultural Dept., Quarantine service.
Batiscan. ....	Crew of 3	" 8..	40	8 20	Paddle, tug, Quebec and Batiscan.
Contest. ....	150	" 9..	274	29 92	" " and classed for pass. case of want.
Kinogami. ....	Crew of 2	" 13..	21	6 68	Screw, tug, Chicoutimi river.
Paribonca. ....	" 6	" 14..	179	22 32	Paddle, " Lake St. John.
Undine. ....	" 2	" 14..	17	6 36	Screw, " "
Thor. ....	" 10	" 18..	323	30 84	Paddle, " Saguenay river.
Mistasini. ....	40	" 16..	249	27 92	" pass., Roberval & G'd Discharge.
Marie Louise. ....		" 19..	99	12 92	" ferry, St. Anne & Chicoutimi.
Dauntless. ....		" 21..	81	16 48	Screw tug, Montreal and Gulf.
Victor. ....		" 21..	35	7 80	" " Quebec Harbour.
Alma. ....		" 21..	12	5 96	" " "
M. E. Hacket. ....		" 22..	78	11 24	" " "
Randolph. ....	Crew of 2	" 22..	17	6 36	" " "
Marie Josephine. ....	" 9	" 22..	117	14 36	" steam wrecking schooner, Gulf.
St. Roch. ....	" 2	" 23..	18	6 44	" tug, Quebec Harbour.
St. George. ....	" 2	" 23..	12	5 96	" " "
Dream. ....					Owned and used for Custom H'se; Dept.
Spray. ....	Crew of 2	June 25..	24	6 92	Screw, Quebec Harbour tug.
Hope. ....	" 2	" 25..	19	6 52	" " "
Johnnie H. ....	" 2	" 25..	14	6 12	" " "
Bella Ritchie. ....	40	" 28..	69	10 52	Paddle, pass., Three Rivers & Champ'ln.
Bourgeois. ....	40	" 28..	94	12 52	" " " Laval.
Beatrice. ....	Crew of 1	" 28..	40	8 20	" tug, Three Rivers & St. Maurice.
Blanford. ....	" 3	" 29..	65	10 20	" " " "
Glacial. ....	100	" 29..	109	16 72	Screw, ferry, " St. Angèle.
Como. ....	40	" 29..	75	11 00	Paddle, " " Nicolet
St. Anne. ....		" 30..	14	6 12	Screw.
Arthur. ....		" 30..	78	11 24	Paddle, tug, Sorel & Three Rivers.
Rodolphe. ....		" 30..	116	14 28	" " "
Polaris. ....		" 25..	533	50 64	Screw, Quebec and Levis ferry.
Pilot. ....		" 26..	426	42 08	" " "
Adriatic. ....		" 16..	156	20 48	" Port Mulgrave ferry.
Wanderer. ....		" 26..	565	53 20	" pass., Montreal and Gaspé.
Forest. ....			26	7 08	
Island Queen. ....			98	12 84	
Marie Louise. ....			6	5 48	
St. Antoine. ....			8	5 64	
Arizona. ....			9	5 72	
Total. ....			36,702	3,784 16	

JOS. SAMSON,  
Boiler and Machinery Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1900.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.		Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1899.			\$    cts	
Contest.....	150	July	3..	274	29 92	Pad., pass. and tug, Montreal and Gulf.
City of London. ....	125	"	8..	.....	Paid in Kingston.	Screw, pass., Montreal and Gaspé.
Richelieu (of Montreal)	40	"	13.	34	7 72	"        St. John and Lacolle.
Napierville.. ....	40	"	14..	165	21 20	Pad., ferry, Verdun and C. Ste. Catherine
Glacial. ....	100	"	15..	109	16 72	Screw, ferry, Three Rivers & St. Angele.
Bourgeois.....	40	"	15..	94	12 52	Pad., ferry, Three Rivers & St. Grégoire.
Como.....	40	"	15..	75	11 00	"        "        Nicolet.
Richelieu (of Ottawa)..	40	"	15..	113	17 04	Pad., pass., Montreal and Valleyfield.
Arizona.....	25	"	19..	9	5 72	Screw, pass., waters of Lake St. Joseph.
Owl. ....	10	"	24..	4	5 32	"        Newport and Magog.
Jubilee.....	30	Aug.	14..	25	7 00	"        Megantic and Oben.
Tiber.....	80	"	16..	1,736	146 88	"        & ft., Montreal and Halifax.
Marie Louise. ....	40	Sept.	12.	99	12 92	Pad., ferry, Chicoutimi and Ste. Anne.
Peribonca.....	40	"	13..	179	22 32	Pad., pass., Roberval and Mistassini.
Le Colon.....	40	"	14..	173	21 84	"        "        "        "
Undine.. . . .	40	"	15..	17	6 36	Screw, pass.        "        G'de Décharge.
Frances.....	40	"	17..	19	6 52	Pad., ferry, Campbellton and Cross Point
M. E. Hacket.....	40	"	19..	78	11 24	Screw, Harbour tender.
Ivan R. ....	40	"	21..	18	6 44	"    pass., Grand Pelle & LaTuque.
Polaris.....	450	"	22..	533	50 64	"    ferry, Quebec and Lévis.
Pilot. ....	450	"	23..	426	42 08	"        "        "
Queen.....	450	"	23.	367	37 36	"        "        "
Frontenac... ..	555	Oct.	6..	304	32 32	Screw, pass., Quebec and St. Romuald.
		1900.				
Rhoda.....	150	April	16..	182	22 56	Pad., pass., Quebec and Rimouski.
Lord Stanley. ....	30	"	30..	276	30 08	Screw, wrecker, Montreal and Gulf.
Prefontaine.....	40	"	20..	434	42 72	"    pass., Montreal and Quebec.
Laprairie. ....	350	"	23..	600	56 00	Pad., ferry, Montreal and Laprairie.
Berthier.....	600	"	23..	934	82 72	"    pass., Montreal and Three Rivers.
Chambly.....	600	"	23..	535	50 80	"        "        Chambly.
Carolina.....	600	"	23..	977	86 16	"        "        Chicoutimi.
Montreal.....	800	"	24..	2,068	173 44	"        "        Quebec.
Sorel. ....	40	"	24..	158	20 64	"        Sorel and St. Thomas.
Terrebonne. ....	450	"	24..	636	58 88	"        Montreal and Sorel.
Eagle.....	30	"	24..	23	6 84	Screw, pass., St. Hyacinthe & St. Cesaire.
Polino.....	30	"	27..	807	72 56	"        & ft., Montreal & St. John, Nfd
Campana. ....	400	"	30..	1,697	143 76	"        "        Pictou.
Orleans.....	530	"	30..	269	29 52	Screw, ferry, Quebec and Isle of Orleans.
Frontenac.....	555	"	30..	304	32 32	"        "        St Romuald.
Champion.....	612	"	30..	482	46 56	Pad., pass., Quebec and Berthier.
Charlevoix. ....	75	May	1..	212	24 96	Screw, pass., Quebec and Murray Bay.
St. Olaf.....	130	"	1..	305	32 40	"        & ft. Quebec and Netasquau.
Saguenay.....	443	"	1..	992	87 36	Pad., pass., Quebec and Chicoutimi.
Contest. ....	150	"	1..	274	29 92	"        "        Gulf.
North. ....	450	"	4..	289	31 12	Pad., ferry, Quebec and Lévis.
South.....	450	"	4..	349	35 92	"        "        "
Etoile. ....	491	"	5..	560	52 80	Pad., pass., Quebec and Montreal.
Ste. Croix.....	550	"	5..	506	48 48	"        "        Ste. Croix.
St. Louis. ....	514	"	5..	428	42 24	"        "        Montreal.
Algerian.....	400	"	9..	914	81 12	"        Montreal and Toronto.
Caspian.....	400	"	9..	968	85 44	"        "        "
Hamilton.....	375	"	9..	938	83 04	"        "        Hamilton.
Hosana. ....	185	"	9..	89	12 12	Screw, ferry, Montreal and Longueuil.
Cultivateur. ....	751	"	9..	362	36 96	Pad., ferry, Montreal and Isd. St. Helen.
Ste. Anne.....	40	"	9..	14	6 12	Screw, ferry, Sorel and Berthier.
Fire Fly.....	40	"	9..	214	25 12	Pad., ferry, Sorel and Berthier.
Longueuil. ....	300	"	9..	365	37 20	"        Hochelaga and Longueuil.
Hochelaga.....	300	"	9..	419	41 52	"        Hochelaga and Boucherville.



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—Quebec and Montreal Division.—*Concluded.*HULL INSPECTION.—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where Employed.
		1900.		\$ cts.	
Columbian.....	950	May 19..	704	64 32	Screw, pass., Montreal and Toronto.
Mansfield.....	60	" 21..	169	21 52	" ferry, N. Edinburg and Gatineau Pt
Empress.....	800	" 21..	677	62 16	Pad., pas., Ottawa and Grenville.
Victoria.....	300	" 21..	181	22 48	Screw, pass., Ottawa and Thurso.
Beatrice B.....	40	" 21..	59	9 72	" ferry, Ottawa and Hull.
Marquis of Lorne.....	40	" 21..	20	6 60	" "
Emilie.....		" 22..	12	5 96	Not running.
G. B. Green.....	600	" 22..	255	28 40	Pad., pass., Aylmer and Chats Rapids.
Harry Bate.....	40	" 22..	254	28 32	Screw, pass. and ft., Ottawa and Montreal.
Hall.....	50	" 22..	247	27 76	" "
Olive.....	60	" 22..	213	25 04	" "
Agnes.....	40	" 23..	29	7 32	Screw, pass., Buckingham and High Falls.
Mildred.....	25	" 23..	15	6 20	" "
Léon.....	20	" 23..	15	6 20	Screw, pass., High Falls & N.-Dame du Laus.
Glide.....	40	" 24..	80	11 40	" Calumet and Hawkesbury.
Boneto.....	30	" 24..	17	6 36	" Calumet and L'Original.
Princess.....	443	" 25..	527	50 16	Pad., pass., Montreal and Carillon.
Duchess of York.....	700	" 25..	490	47 20	" "
Ida.....	140	" 25..	247	27 76	Screw, pass. and ft., Montreal and Ottawa.
Island Queen.....	250	June 1..	98	12 84	Screw, ferry, Montreal and Longueuil.
Quebec.....	800	" 1..	2,656	220 48	Pad., pass., Quebec and Montreal.
Bohemian.....	375	" 1..	628	58 24	" Montreal and Prescott.
Corsican.....	400	" 1..	946	83 68	" Montreal and Toronto.
Trois Rivières.....	1,161	" 1..	1,552	132 16	" Montr'l & Ste-Anne de Beaupre.
Ivan.....	40	" 1..	18	6 44	Screw, pass., Grand Piles and Lатуке.
Richielieu of Ottawa.....	100	" 1..	113	17 04	Pad., pass., Montreal and Valleyfield.
Richard.....	6	" 1..	466	45 28	Screw, pass. & ft., Quebec & Upper Lakes.
Victoria.....	30	" 11..	196	23 68	" pass. & ft., Montreal & St. Johns, Que
Sparrow.....	40	" 12..	38	8 04	" pass, Callender and Frank Bay.
Dauntless.....	20	" 12..	8	5 64	" on waters of Lake Nipissing.
Queen.....	40	" 12..	15	6 20	" on waters of North Bay.
Booth.....	25	" 12..	347	32 76	Pad., pass., Muscowassa & Sturgeon Lake.
Ladas.....	40	" 13..	54	9 32	Screw, pass., Callendar and Chaudière.
Maid of the Mills.....	20	" 15..	8	5 64	" on Wahnapi Lake.
Verve.....	40	" 15..	55	9 40	" "
Mahagama.....	40	" 15..	20	6 60	" Pembroke & Des Joachims.
A. D. Mulligan.....	40	" 15..	77	11 16	Screw, ferry, Pembroke & Allumet Island.
Hudson.....	75	" 16..	45	8 60	Pad. ferry on Barry's Bay.
Thistle.....	10	" 17..	2	5 16	Screw, pass. on Barry's Bay.
Chateauguay.....	40	" 19..	222	25 76	Pad., pass., Montreal and Chateauguay.
Maud.....	350	" 19..	269	29 52	" Montreal and Ottawa.
Garnet.....	200	" 19..	152	20 16	" Montreal and Valleyfield.
Brothers.....	375	" 19..	546	51 68	" Montreal and Berthier.
Fligate.....	295	" 19..	425	42 00	" Montreal and Cornwall.
Sovereign.....	700	" 19..	637	58 96	" Montreal and Carillon.
John.....	30	" 20..	35	7 80	Pad., pass., Carillon at Pt. Fortune.
Dama.....	40	" 20..	55	9 40	Screw, pleas., Montreal and Quebec.
Laurier.....	40	" 20..	19	6 52	" pass., Montreal and Vaudreuil.
Robinault.....	200	" 20..	332	34 56	" Montreal and Valleyfield.
Welshman.....	25	" 20..	156	20 48	Screw, pass. & ft., Montreal and Ottawa.
Spartan.....	400	" 21..	946	83 68	Pad., pass., Montreal and Toronto.
Canada.....	600	" 21..	1,768	149 44	" Montreal and Chicoutimi.
Wanderer.....	100	" 25..	565	53 20	Screw, pass., Montreal and Gaspé.
Adriatic.....	300	" 15..	156	20 48	" ferry, Port Mulgrave & Pt Tupper.
Victoria.....	400	" 15..	188	23 04	" pass., Ottawa & Thurso.
Savoy.....	25	" 5.	348	35 84	" pass. & ft., Quebec and Anticosti.

PIERRE D. BRUNELLE,  
Hull Inspector.



SESSIONAL PAPER No. 21

Tow Barges Inspected for the Year ended June 30, 1900.

QUEBEC AND MONTREAL DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1901.		\$ cts.	
Chaudière .....	150	June 12..	.....	10 00	
A. D. Smith .....	40	" 16..	.....	10 00	
Total.....	.....	.....	.....	20 00	

PIERRE D. BRUNELLE,  
*Hull Inspector.*

STEAM Vessels not Inspected for the Year ended June 30, 1900.

QUEBEC AND MONTREAL DIVISION.

BOILER AND MACHINERY.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. — Why not inspected and class of vessel.
Admiral.....	682	408	Inspected since.
Nil.....	27	19	Not in commission.
Alleghenay.....	5	3	Not running.
Le Nord.....	6	4	Inspected since.
Maud .....	50	34	
Jessie Hume .....	58	40	Not running.
Victory .....	55	37	"
Neptune.....	11	8	"
Commodore H.....	10	3	"
Dot.....	10	7	"
Eva .....	4	3	"
Five Brothers .....	11	7	"

HULL AND EQUIPMENT.

Thurso... ..,	20	9	Laid up.
Mistassini.....	249	157	Inspected since.
Rivière du Loup.....	199	129	Not employed.
Lady of the Lake.....	607	369	Inspected since.
Anny C.....	6	4	"
Mississippi .....	4	2	"
Greetland.....	1,091	702	"
Bonenfant. ....	31	21	"
Bella Ritchie. ....	69	42	"
	3,205	2,008	

JOS. SAMSON,  
*Boiler and Machinery Inspector.*

PIERRE D. BRUNELLE,  
*Hull Inspector.*



STEAM Vessels Inspected for the Year ended December 30, 1900.

NOVA SCOTIA DIVISION.  
BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Express	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Léon.....		July 3..	19·82	6 60	Screw, tug, coasting.
Victor .....		" 3..	9·62	5 80	" "
Star.....	15	" 4..	6·07	5 48	Screw, passenger, Wallace Harbour.
Eldon.....	40	" 5..	37·91	8 04	" " Strait of Canso.
Mulgrave....	250	" 6..	484·86	Gov.pro'ty	" " "
Alpha .....		" 13..	61·20	9 88	" tug, coasting.
		1899.			
David Duncan.....		Dec. 31..	20·59	6 68	" "
		1900.			
Centreville.....		July 13..	59·71	9 80	" "
Yuba.....	25	" 15..	12·04	5 96	" pass., Barrington, Cape Island.
Aid .....		" 17..	98·55	12 84	" reeking tug, coasting.
St. Michael.....	15	" 17..	39·20	8 12	" tug and passenger coasting.
Trusty.....	150	" 17..	57·60	9 64	" passenger, La Have River.
Fairy .....		" 18..	15·55	6 28	" tug, Lunenburg Harbor.
Maggie.....	40	" 18..	19·26	6 52	" pass., Lunenburg and South.
Carrie .....	40	" 18..	14·82	6 20	" " Mahone and Chester.
Eleanor M. Cates.....		" 25..	58·81	9 72	" tug, coasting.
Vesta.....		" 25..	9·21	5 72	" passenger, Mira River.
Lennox.....	20	" 27..	66·29	10 28	Paddle, ferry, Lennox passage.
Malcom Cann.....	115	" 27..	211·81	24 76	Screw, passenger, coasting.
Elsie .....		Aug. 4..	22·14	6 76	" tug, coasting.
L. Boyer .....	100	" 15..	60·00	9 80	" passenger, Halifax Harbour.
Collector .....	75	" 14..	52·02	9 16	" " "
Delta.....	12	" 14..	873·21	77 84	" " and freight Foreign
Bessie and Harry .....		" 16..	22·00	6 76	" water boat, Halifax Harbor.
Anticosti .....		" 1..	19·00	6 52	" freight, coasting.
Henry Hoover.....	75	" 21..	54·64	9 40	" tug and pass, Halifax Harbour
Commodore.....	30	" 23..	12·84	6 04	" passenger, Halifax Harbour.
Mascotte.....	18	Sept. 13..	35·40	7 80	" " "
Annie .....		Oct. 10..	42·12	8 36	" water boat.
La Have .....		" 13..	49·27	8 92	" tug, coasting.
Wilfred C .....	60	" 26..	99·26	12 92	" passenger.
Bridgewater.....	225	" 27..	207·79	24 64	" "
Goliah.....	20	Oct. 30..	146·83	19 76	" tug and passenger coasting.
Edna R.....		Nov. 7..	49·66	8 92	" " coasting.
Wanda.....		" 7..	38·48	8 04	" " "
Nereid .....		" 8..	12·24	5 96	" fishing boat, coasting.
Westport.....	21	" 8..	80·09	11 40	" passenger, coasting.
Halifax .....	250	" 10..	338·42	35 04	Paddle, ferry, Halifax Harbour.
Lady Glover.....	25	" 29..	137·51	19 04	Screw, freight and passenger coasting.
Ralph E. S.....		Dec. 2..	27·82	7 24	" fish boat, coasting.
J. L. Nelson.....		" 27..	37·81	8 04	" " "
		1901.			
Newfoundland.....		Feb. 7..	918·75	78 52	" freight "
Harlaw .....	60	" 17..	451·36	44 08	" passenger coasting.
Louisburg .....		Mar. 24..	1,815·60	150 28	" freight, foreign.
Lenore .....		" 24..	15·23	6 20	" fish boat, coasting.
Florence C .....		" 27..	28·98	8 12	" " "
Aneta .....		April 4..	26·50	7 16	" " "
Helen May Butter.....		" 4..	66·98	10 36	" " "
Cacouna.....		" 20..	1,450·78	121 08	" freight, foreign.
Cape Breton.....		" 21..	1,764·19	146 12	" "
Coban.....	37	" 26..	1,063·30	93 04	" freight and passenger, foreign.
Yarmouth .....	450	" 18..	1,451·92	124 16	" passenger, foreign.
John L. Cann.....	125	" 13..	165·55	21 28	" " coasting.
Island Gem.....		" 18..	15·62	6 28	" fish boat, coasting.
Percy Cann.....	35	" 18..	80·06	11 40	" passenger "



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Nova Scotia Division—*Concluded.*BOILER AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901.		\$ cts.	
Gertrude M. ....	35	April 17 .	47.58	8 84	Screw, passenger, coasting.
Bonavista . . . . .	50	" 26..	1,306.33	112 48	" freight and passenger, foreign.
Lunenburg . . . . .	200	" 27..	265.55	29 28	" " " coasting.
Halifax . . . . .	500	May 2..	1,738.45	147 04	" passenger, foreign.
Marion . . . . .	40	" 3..	11.57	5 96	" " Pictou Harbour.
Arcadia . . . . .	40	" 4..	61.64	9 96	" " coasting.
May Queen . . . . .	25	" 4..	35.92	7 88	" " Pictou Harbour.
Diamond . . . . .		" 4..	22.65	6 84	" tug, coasting.
Douglas H. Thomas . . . .	15	" 5..	211.91	24 96	" " and passenger, coasting.
Chester . . . . .		May 7..	79.50	11 40	Screw, tug, coasting.
Avon . . . . .	100	" 7..	64.66	10 12	" passenger, Avon River.
W. M. Weatherspoon . . . .		" 7..	59.29	9 72	" tug " "
Falmouth . . . . .		" 7..	43.03	8 44	" " " "
Carrie . . . . .	40	" 8..	14.83	6 20	" pass. Chester and Mahone.
Ulala . . . . .		" 16..	13.70	6 12	" yacht, Halifax Harbour.
Peerless . . . . .	300	" 21..	94.27	12 52	" passenger, Sydney Harbour.
Hygeia . . . . .	190	" 22..	57.69	9 64	" " " "
Weymouth . . . . .	40	Jan. 1..	153.93	20 32	" " coasting.
C. M. Winch . . . . .		May 22..	87.72	12 04	" tug " "
Gipse . . . . .		" 22..	16.70	6 36	" " Sydney Harbour.
Acadia . . . . .	225	" 23..	74.21	10 92	" passenger " "
Marion . . . . .	400	" 23..	478.49	46 24	Paddle " Sydney and Mulgrave.
Gladiator . . . . .		Jan. 1..	70.40	10 60	Screw, tug, coasting.
Zaidee . . . . .		May 23..	18.63	6 44	" water boat, Sydney Harbour.
Daisy . . . . .		" 23..	10.74	5 88	" " " "
Zulieka . . . . .		" 33..	12.38	5 96	" yacht " "
Sea Bird . . . . .		" 24..	41.28	8 28	" fish boat, coasting.
Blue Hill . . . . .	140	" 24..	195.83	23 68	" pass., Sydney and Mulgrave.
Merrimac . . . . .	15	" 24..	85.80	11 80	" pass. & tug " "
Active . . . . .		" 25..	59.91	9 80	" " coasting.
Vulcan . . . . .		" 25..	18.40	6 44	" " " "
Meadow Flower . . . . .		" 25..	6.56	5 56	" water boat, Canso Harbour.
Shannon . . . . .		" 1..	75.11	11 00	" tug coasting.
Vega . . . . .	90	" 26..	132.22	18 56	" pass., Sydney & Mulgrave.
Petrel . . . . .	20	" 30..	6.36	5 48	" " Halifax Harbour.
Dartmouth . . . . .	300	" 9..	311.23	32 88	Paddle, ferry " "
Robbie Burns . . . . .	200	June 12..	88.95	12 12	Screw, excursion barge, Halifax Har.
Highland Mary . . . . .	150	" 13..	73.73	10 92	" " " "
Rescue . . . . .		" 12..	124.09	14 92	" tug, coasting.
Ida Lue . . . . .	21	" 14..	44.51	8 60	" pass. " "
Boston . . . . .	550	" 16..	1,694.50	143 52	" " " foreign.
Juno . . . . .	40	" 15..	9.29	5 72	" pass., Yarmouth Harbour.
Dolphin . . . . .		" 15..	6.07	5 64	" fish boat, coasting.
Freddie V . . . . .		" 15..	26.69	7 08	" tug " "
Tourist . . . . .	38	" 20..	4.42	5 32	" pass., Yarmouth Harbour.
Yuba . . . . .	25	" 20..	12.04	5 96	" " Barrington " "
Glencoe . . . . .	40	" 21..	32.21	7 56	" " Annapolis River.
Marina . . . . .	40	" 21..	32.46	7 56	" " " "
Beaver . . . . .	160	" 22..	84.73	11 80	" " coasting.
Pastime . . . . .	150	" 27..	67.71	10 44	" excursion barge, Halifax Har.
A. C. Whitney . . . . .	100	" 29..	62.67	10 04	" pass. and tug " "
Lion . . . . .		" 28..	19.82	6 60	" tug, coasting.
Dolphin . . . . .		" 28..	12.78	6 04	" " " "
Star . . . . .	15	" 29..	6.07	5 48	" pass., Wallace Harbour.
Totals . . . . .			21,43.554	2,275 92	

JOHN P. ESDAILE,  
Steamboat Inspector, Halifax, N.S.



64 VICTORIA, A. 1901

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended June 30, 1900.

NOVA SCOTIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and where employed.
		1900		\$ cts.	
Tyrian.....	30	July 12..	1038·57	91 12	Screw, passenger, foreign.
Bruce.....	300	" 22..	1154·59	100 40	" "
Orinoco.....	115	Aug. 15..	1863·63	157 12	" "
Chebucto.....	232	" 12..	578·48	54 24	" ferry, Halifax Harbour.
City of Ghent.....	70	" 22..	198·64	23 92	" passenger, coasting.
Beta.....	75	Sept. 12..	1086·67	94 96	" " foreign.
Prince Edward.....	400	" 15..	1413 74	121 12	" " "
Prince George.....	500	Nov. 13..	2040·14	171 20	" " "
		1901			
City of Monticello.....	350	April 23..	1033·65	90 72	Paddle, passenger, coasting.
City of Ghent.....	60	" 28..	198·64	23 92	Screw " "
Silvia.....	109	May 5..	1707·70	144 64	" " foreign.
Amelia.....	250	Jan. 1..	356·54	36 48	" " coasting.
Pawnee.....	450	May 22..	106·80	16 56	" " "
Elaine.....	400	" 23..	272·08	29 76	" " "
Florida.....	200	June 5..	1786·30	150 88	" " foreign.
Prince Arthur.....	600	" 19..	2041·44	171 28	" " "
Evangeline ..	160	" 22..	78·74	11 32	" " coasting.
La Grande Duchesse ..	700	" 27..	5017·00	409 36	" " foreign.
Total.....			21973·35	1,899 00	

JOHN P. ESDAILE,  
*Steamboat Inspector, Halifax, N.S.*

STEAM Vessels not Inspected for the Year ended June 30, 1900.

NOVA SCOTIA DIVISION.

Name of Vessel.	Gross Tonnage.	Reg-istered Tonnage.	Remarks.
			Why not Inspected and Class of Vessel.
Tusket.....	3·04	2·00	Laid up tug.
Alida.....	64·18	29·52	" "
Scotia.....	41·58	28·27	" "
Gem.....	4·68	2·12	" fishing boat.
Havana.....	470·18	245·86	" passenger.
Maple Leaf.....	129·06	81·31	" ferry boat.
Volunda.....	29·80	13·96	" yacht.
City of St. John.....	709·12	446·75	" passenger.
Jessie Gray.....	76·01	47·93	" lighter.
Bessie.....	10·45	5·74	" passenger.
Mic-Mac.....	150·63	102·30	" ferry boat.
Salvor.....	44·93	34·90	" lighter, for new boiler.
Alpha.....	306·91	211·54	" passenger.
Mayflower.....	392·05	235·78	" "
Rob Roy.....	13·97	9·52	" tug.
Albatross.....	31·38	18·25	" yacht.
Total ..	2,477·98	1,515·75	

JOHN P. ESDAILE,  
*Steamboat Inspector, Halifax, N.S.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the Year ended June 30, 1900.

## NOVA SCOTIA.

## HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certifi- cate expi- res.	Gross tons.	Tonnage dues and inspection fees paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Boston.....	550	July 14.	1694.50	143 52	Screw, passenger and freight, Yarmouth and foreign.
St. Michael.....	15	" 17.	39.20	8 12	" " tug, Liverpool and shore ports.
Trusty.....	150	" 18.	57.60	9 64	" " " Bridgewater & LaHave Rv.
Maggie.....	40	" 18.	19.26	6 52	" " " Lunenburg and south.
Carrie.....	40	" 18.	14.83	6 20	" " " Mahone Bay and Chester.
Mulgrave.....	250	" 26.	484.86		Government Steamer, Strait of Canso.
Malcom Cann.....	115	" 27.	211.81	24 96	Screw, passenger, Mulgrave and Coastwise.
Yuba.....	25	" 15.	12.04	5 96	" " Barrington passage.
Vesta.....			9.21	5 72	No certificate issued, want of equipment.
Lennox.....	20	July 26.	66.29	10 28	Paddle, passenger, Lennox passage.
Collector.....	75	Aug. 14.	52.02	9 16	Twin screw, passenger barge, Halifax Harbour.
L. Boyer.....	100	" 15.	60.00	9 80	Screw, passenger and tug, Halifax Harbour.
Henry Hoover.....	75	" 22.	54.64	9 40	" " " "
Commodore.....	30	" 1.	12.84	6 04	" " " "
Delta.....	12	" 15.	873.21	77 84	Screw, passenger and freight, Home and foreign.
Mascotte.....	18	Sept. 13.	35.40	7 80	" " " Halifax Harbour.
Wilfred.....	60	Oct. 26.	99.26	12 92	" " " and freight, Halifax and Coast.
Bridgewater.....	225	" 27.	207.79	24 64	" " " " "
Goliah.....	20	" 30.	146.83	19 76	" " " " "
Westport.....	21	Nov. 8.	80.09	11 40	" " " Yarmouth and Coast.
Halifax.....	250	" 22.	338.42	35 04	Paddle, ferry, Halifax and Dartmouth.
Lady Glover...	25	" 28.	137.51	19 04	Screw, passenger and freight, Halifax and Coast.
Merrimac.....	15	May 25.	85.80	11 80	" " " tug, Strait of Canso.
		1901.			
Newfoundland.....		Feb. 22.	918.75	78 52	Screw, freight, Halifax and Coast.
Louisburg.....		Mch. 31.	1815.60	150 28	" " " " "
Yarmouth.....	450	Apl. 17.	1451.92	124 16	" passenger and freight, Home and foreign.
John L. Cann.....	125	" 18.	165.55	21 28	" " " Mulgrave and Coast.
Percy Cann.....	35	" 18.	80.06	11 40	" " " Yarmouth and Coast.
Gertrude M.....	35	" 18.	47.58	8 84	" " " " "
Cape Breton.....		" 24.	1164.19	146 12	" freight, Home and foreign.
Cacouna.....		" 25.	1450.78	121 08	" " " " "
Coban.....	37	" 25.	1063.30	93 04	" passenger and freight, Home and foreign.
Bonavista.....	50	" 26.	1306.33	112 48	" " " " "
Harlaw.....	60	" 25.	451.36	44 00	" " " Halifax and Coasting.
Lunenburg.....	200	" 28.	265.55	29 28	" " " " "
Halifax.....	500	May 1.	1738.45	147 04	" " " " "
Arcadia.....	40	" 3.	61.64	9 96	" " " tug, Pictou and Coasting.
May Queen.....	25	" 3.	35.92	7 88	" " " " harbour and rivers.
Marion.....	40	" 4.	11.57	5 96	" " " " "
Avon.....	100	" 8.	64.66	10 12	" " " river Avon and Parrsboro.
Douglas H. Thomas	15	" 10.	211.91	24 96	" tug and passenger, Halifax and Coast.
Weymouth.....	40	Jan. 1.	153.93	20 32	" passenger and tug, Sydney and Coast.
Hygiea.....	190	May 22.	57.69	9 64	" ferry, Sydney and North Sydney.
Peerless.....	300	" 22.	94.27	12 52	" " " " "
Marion.....	400	" 23.	478.49	46 24	Paddle, pass. and fr., Sydney and Bras d'or Lakes.
Acadia.....	225	" 23.	74.21	10 92	Screw, ferry, Sydney and North Sydney.
Blue Hill.....	140	" 24.	195.83	23 68	" pass. and freight, Baddeck and Grand Lakes.
Merrimac.....	15	" 25.	85.80	11 80	" tug and pass., Sydney Harbour & Str. of Canso.
Vega.....	90	" 25.	132.22	18 56	" pass., Strait of Canso and Bras d'or Lakes.
Petrel.....	20	" 29.	6.36	5 48	" ferry, Richmond and Dartmouth.
Dartmouth.....	300	" 9.	311.23	32 88	Paddle, ferry, Halifax and Dartmouth.
Ida Lue.....	21	June 14.	44.51	8 60	Screw, tug and passenger, Yarmouth and Coast.
Juno.....	40	" 15.	9.29	5 72	" ferry, Yarmouth and Bay View.
Boston.....	550	" 15.	1694.50	143 52	" passenger and freight, Home and foreign.
Yuba.....	25	" 23.	12.04	5 96	" ferry, Barrington Passage.
Tourist.....	38	" 23.	4.42	5 32	" " Yarmouth Harbour.
Marina.....	40	" 26.	32.46	7 56	" tug and passenger, Annapolis Basin.
Glencoe.....	40	" 26.	32.21	7 56	" ferry, Annapolis River.
Beaver.....	160	" 26.	84.73	11 80	" pass., and freight, Canning and Bay of Fundy.
Highland Mary...	150	" 29.	73.73	10 92	Twin screw, excursion, Halifax Harbour.
Robbie Burns.....	200	" 26.	88.95	12 12	" " " "
A. C. Whitney....	100	" 26.	62.67	10 04	" " " "
Pastime.....	150	" 30.	67.71	10 44	" " " "



64 VICTORIA, A. 1901

STEAM Vessels Inspected in Canada but Registered Elsewhere, for the year ended June 30, 1900.

NOVA SCOTIA DIVISION.  
HULL INSPECTION.

Name of Vessel.	Number of passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and where Employed.
				\$ cts.	
Tyrian .....	30	July 12.	1038·57	91 12	Screw, passenger and freight, Canada and foreign.
Bruce .....	300	" 22.	1151·59	100 40	" pass. and fr. Nov. Scotia and Newfoundland.
Orinoco.....	115	Aug. 15.	1863·63	157 12	" " Home and foreign.
Chebucto. ....	232	" 16.	578·48	54 24	Twin screw, ferry, Halifax and Dartmouth.
City of Ghent.....	70	" 22.	198·64	23 92	Screw, passenger and freight, Halifax and Coastwise.
Beta .....	75	Sep. 13.	1086·67	94 96	" " " Home and foreign.
Prince Edward ...	400	" 15.	1413·74	121 12	" " " "
Prince George ....	500	Nov. 13.	2040·14	171 20	" " " "
		1901.			
City of Monticello.	350	Apr. 23.	1033·65	99 72	Paddle, " " Halifax and Coast.
City of Ghent.....	60	" 27.	198·64	23 92	Screw " " "
Pawnee.....	450	May 23.	106·80	16 56	" " " Sydney and Bras d'Or
Elaine. ....	400	" 23.	272·08	29 76	" " " [Lakes.
Annelia .....	250	Jan. 1.	356·64	36 48	" " " Pictou and Coastwise.
Florida. . . . .	200	June 4.	1786·30	150 88	" " " Home and foreign.
Sylvia.....	109	May 14.	1707·70	144 64	" " " "
La Grand Duchesse	700	June 27.	5017·00	409 36	" " " "
Prince Arthur ....	600	" 22.	2041·44	171 28	" " " "
Evangeline .....	160	" 26.	78·74	11 32	" " " Kingsport, Parrsboro.

S. R. HILL,  
*Inspector of Hulls and Equipment, Halifax.*

STEAM Vessels not Inspected for the Year ended June 30, 1900.

NOVA SCOTIA DIVISION.

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. Why not Inspected and Class of Vessel.
Havana.....	470·18	245·86	Laid up, passenger and freight.
Maple Leaf.....	129·06	81·31	" Ferry boat.
City of St. John.....	709·12	446·75	" passenger and freight.
Bessie .....	10·45	5·74	" "
Mic Mac.....	150·63	102·30	" Ferry boat.
Alpha .....	306·91	211·54	" passenger and freight.
Mayflower.....	392·05	235·78	" "

S. R. HILL,  
*Inspector of Hulls and Equipment, Halifax, N. S.*



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected for the year ended June 30, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where Employed.
		1900.		\$ cts.	
St. Lawrence.....		July 4.	50.82	9 08	Screw, tug, Bathurst.
Borrioboola Gha.....			95.77	12 68	Paddle, " Dalhousie.
Eva.....		June 22..	18.01	6 44	Screw, ferry "
Henrietta.....		July 5..	19.12	6 52	" tug "
Nellie H.....		" 5..	7.52	5 64	" fish boat "
Victor.....	35	June 22..	45.51	8 68	Paddle, tug, Campbellton.
Squirrel.....		July 6..	13.11	6 04	Screw, " Dalhousie.
Calluna.....		" 15..	22.26	6 76	" " Richibucto.
Frederick A.....	25	" 15..	31.11	7 48	" " "
Alice.....		" 17..	15.77	6 28	" " Buctouche.
Annie Currier.....		June 8..	10.56	5 88	" " Fredericton.
Springhill.....	100	July 20..	189.05	23 12	" pass. and tug, St. John.
Amanda Green.....		" 28..	19.63	5 60	" tug "
Arbutus.....	86	Aug. 7..	46.76	8 76	" pass., St. Croix River.
Calla.....	30	" 8..	9.79	5 80	" " "
Marguerite.....		" 9..	19.66	6 60	" yacht "
Dream.....		" 14..	44.51	8 60	" " St. John River.
Cricket.....		" 18..	4.85	5 40	" " "
Elliot.....		" 25..	367.50	34 36	" freight, Charlottetown.
Western Extension....	280	Sept. 16..	424.89	41 92	Paddle, ferry, St. John.
Nautilus.....		" 28..	26.56	7 16	Screw, yacht, St. Croix River.
Vacunna.....		Oct. 4..	9.52	5 80	" tug, Vanceboro.
Aberdeen.....	400	" 4..	243.86	27 52	Stern-wheel, pass., St. John River.
Delta.....	40	" 10..	19.93	6 60	Screw, pass., Hopewell Cape.
Beryl Essie.....		" 11..	23.83	6 92	" tug, Tignish.
Wenola.....		" 11..	25.10	7 00	" " Port Elgin.
St. Andrew.....		June 23..	76.64	11 16	" " Miramichi.
Kingsville.....		Nov. 2..	36.59	7 96	" " St. John.
La Tour.....	70	" 7..	154.43	20 32	" " pass. Coasting.
Ouangondy.....	208	" 28..	294.75	31 60	Paddle, ferry, St. John.
		1901.			
Storm King.....	40	Feb. 20..	107.87	16 64	Screw, pass., St. John.
Hercules.....		" 23..	87.11	11 96	" tug "
E. Ross.....	40	Mar. 8..	29.63	7 40	" ferry "
Wm. H. Murray.....	40	" 21..	72.55	10 84	" pass. and tug, St. John.
Maggie M.....		" 21..	65.78	10 28	" tug, St. John.
Northumberland.....	350	" 28..	1,255.46	108 40	Twin-screw, pass., P. E. I.
Princess.....	350	" 28..	541.79	51 36	Screw, pass., P. E. I.
Jacques Cartier.....	300	" 28..	379.96	38 40	Paddle " "
Hillsborough.....		Not issued	228.67	26 32	" ferry "
Elfin.....	70	Mar. 29..	122.42	17 76	" " "
Captain.....		April 4..	68.43	10 44	Screw, tug, St. John.
Sea King.....		" 4..	128.63	15 32	" " "
Springfield.....	170	" 4..	232.73	26 64	Stern-wheel, pass., St. John.
Fanchon.....	40	" 5..	110.61	16 88	Paddle, pass and tug, "
G. K. King.....		" 5..	45.48	8 60	Screw, tug, St. John.
Admiral.....		" 5..	158.20	17 64	Paddle, tug "
Hero.....		" 5..	127.63	15 24	" " "
Fred Glasier.....		" 6..	10.39	5 80	Screw " "
David Weston.....	450	" 6..	765.15	69 20	Paddle, pass. "
Hampstead.....	150	" 6..	234.52	26 80	Screw " "
Nereid.....		" 9..	30.03	7 40	" tug "
Leader.....		" 9..	29.32	7 32	" " "
Serene E.....		" 9..	24.94	7 00	" " Coasting.
Lilly Glassier.....		" 16..	209.31	21 72	Paddle " St. John.
Winnie.....		" 16..	12.46	5 96	Screw " "
Victoria.....	680	" 16..	1,001.93	88 16	Paddle, pass. "
Star.....	300	" 16..	461.03	44 88	" " "
Bismark.....	40	" 19..	49.04	8 92	" " "
Fannie.....		" 19..	33.44	7 64	Screw, tug "
May Queen.....	321	" 19..	539.40	51 12	Paddle, pass. "
Joseph.....		" 19..	53.75	9 32	Screw, tug "
G. D. Hunter.....		" 19..	67.97	10 44	" " "
Maggie Miller.....	150	" 20..	104.66	16 40	Paddle, ferry "



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STEAM Vessels Inspected, &c.—New Brunswick and P. E. Island Division—Concluded.

BOILERS AND MACHINERY—Concluded

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1901		\$ cts.	
Clifton.....	200	April 20..	138·21	19 04	Stern-wheel, pass., St. John.
Champion...		" 20..	190·14	20 20	Paddle, tug, St. John.
Ernest.....		" 23..	12·58	6 04	Screw " "
Viking.....	150	" 30..	127·70	18 24	" passenger, St. Croix River.
Hope .....		May 2..	305·77	29 48	Paddle, tug, St. John.
Peri.....		" 2..	11·77	5 96	Screw " "
Bessie Ardella .....		" 4..	17·44	6 36	" fish boat, Deer Island.
Martello.. ..		" 5..	33·65	7 72	" tug, St. John.
Wee Laddie .....		" 7..	16·60	6 36	" " "
Flushing.....	140	" 10..	177·65	22 24	" passenger, St. John.
Montague .....	75	" 14..	129·55	18 32	Paddle, ferry, Georgetown,
Electra. ....	40	" 14..	106·96	16 56	Screw, passenger "
Lottie.....		" 14..	5·00	5 40	" fish boat "
Fred M. Batt.....		" 15..	59·90	9 80	" tug, Charlottetown.
Nelson. ....		" 16..	32·90	7 64	" " "
Alameda. ....	40	" 15..	62·59	10 04	" passenger "
T. A. Stewart .....		" 17..	35·94	7 88	Twin-screw, tug, "
Frank C. Batt .....	40	" 16..	32·90	7 64	Screw, ferry, Summerside.
Lillie.....	65	" 21..	71·64	10 76	" tug and passenger, St. John.
Prince Rupert .....	850	" 21..	1,158·44	100 64	Paddle, passenger, St. John.
Mildred .....		" 22..	40·11	8 20	Screw, tug "
Tangent .....		" 25..	35·74	7 88	Twin-screw, tug "
Ada .....		" 28..	3·66	5 32	Screw, yacht, Fredericton.
Meta. ....		" 28..	5·05	5 40	" " "
Anna Currier.....		" 28..	10·56	5 88	" tug "
Carrie Knight .....		" 28..	5·88	5 48	" " "
Quiddy.....		" 28..	30·59	7 40	Paddle " "
Randolph .....		" 29..	8·71	5 72	Twin screw, yacht "
Eva Johnson.....		" 29..	15·77	6 28	Screw, tug "
Electric. ....			3·74	5 32	" " "
Borrioboola Gha.....		June 20..	95·77	12 68	Paddle " Dalhousie
Mary Odell.....	90	" 20..	28·92	7 32	Screw, ferry "
Squirrel,.....		" 20..	13·11	6 04	" tug "
Atlas.....		" 20..	15·79	6 28	" " New Mills.
Nyanza .....	150	" 21..	83·21	11 64	" pass. and tug, Bathurst.
St. Lawrence.....		" 21..	50·82	9 08	" tug "
Florence.....		" 22..	19·33	6 52	" yacht, Newcastle.
Rustler .....	200	" 23..	101·54	16 16	Paddle, passenger "
Lady Dufferin.....	40	" 23..	47·48	8 76	" ferry "
Laura .....		" 23..	13·55	6 12	Screw " "
Bessie .....		" 23..	5·18	5 40	" fish boat "
Loyalist .....		" 23..	17·57	6 44	Paddle, tug "
Irene.....		" 23..	10·29	5 80	Screw " "
Zulu.....		" 23..	17·60	6 44	Paddle " "
Bridgetown. ....		" 23..	14·66	6 20	Screw " "
Nelson. ....	100	" 25..	64·34	10 12	" passenger, Chatham.
St. George....	200	" 25..	277·78	30 24	Paddle " "
Marietta.....	25	" 25..	7·04	5 56	Screw, yacht "
Edith .....		" 25..	21·55	6 76	" tug "
Grip.....		" 25..	4·81	5 40	" " "
Arthur.....		" 25..	4·99	5 40	" yacht "
Jubilee.....		" 25..	16·52	6 36	" fish boat "
Miramichi .....	100	" 26..	78·18	11 00	" passenger "
Sybella H. ....	40	" 26..	70·68	10 68	Paddle, ferry "
St. Isidore.....		" 26..	141·75	16 36	" tug "
Lina .....		" 26..	26·40	7 08	Screw " "
Eva .....		" 26..	18·01	6 44	" " "
Sarcella.....		" 26..	21·86	6 76	" " "
St. Kilda. ....		" 26..	55·64	9 48	Paddle " "
St. Nicholas .....		" 27..	62·20	9 96	Screw, passenger "
St. Andrew.....		" 27..	76·64	11 16	" tug "
Total. ....			14,127·05	1,830 72	

W. L. WARING, Steamboat Inspector.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended June 30, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
General Leavitt.....	40	Aug. 8..	22·65	6 84	Screw, ferry, Lubec.
Lubec.....	95	" 8..	50·94	9 08	" "
Alice.....	45	" 8..	12·14	5 96	" "
Geanette.....	105	" 9..	73·64	10 92	" passenger, St. Stephen.
Rose Standish.....	325	" 9..	384·93	38 80	Paddle " "
St. Croix.....	400	.....	1993·58	167 52	Screw " Boston.
		1901.			
Cumberland.....	550	March 9..	1605·92	136 48	Paddle, passenger, Boston.
State of Maine.....	550	June 6..	1409·99	120 80	" " "
Lubec.....	95	" 7..	50·94	9 08	Screw " Lubec.
			5604·63	505 48	

W. L. WARING,  
*Steamboat Inspector.*

STEAM Vessels not inspected for the Year ended June 30, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Gross Tons.	Registered Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
City of Monticello.....	1,033·65	565 62	Out of District, paddle.
Ada G.....	102·08	30 55	Laid up, paddle.
Lotus.....	5·00	5 00	" screw.
Tourist.....	16·15	10 98	Out of District, screw.
Mascott .....	70·50	47 49	Laid up, screw.
Alcyone.....	15·05	10 73	Out of District "
Francis.....	26·34	17 91	" "
Southport .....	239·92	186 15	Not called for, paddle.
Wm. Aitken.....	74·87	51 19	Laid up, screw.
May Queen.....	35·92	17 94	Out of District, screw.
Flash.....	5·59	2 82	" "
Gipsy.....	16·70	11 37	" "
Derby.....	11·66	8 66	Laid up, paddle.
Utopia.....	25·00	17 00	" screw.
	1678·43	983 41	

W. L. WARING,  
*Steamboat Inspector.*



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the Year ended 30th June, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.		\$ cts.	
Rustler.....	200	June 20..	101·54	16 16	Paddle, pass., Newcastle.
Nyanza.....	150	July 5..	83·21	11 64	Screw " Petitcodiac River.
Frederick A.....	25	" 15..	31·11	7 48	" " Richibucto.
Springhill.....	100	" 20..	189·05	23 12	" " Basin of Minas.
Arbutus.....	86	Aug. 7..	46·76	8 76	" " St. Croix River.
Calla.....	30	" 8..	9·79	5 80	" " "
Elliot.....		" 25..	367·48	34 36	" freight, coasting.
Western Extension....	280	Sept. 16..	424·89	41 92	Paddle, ferry St. John.
Aberdeen.....	400	Oct. 4.	243·86	27 52	Stern-wheel, pass., St. John.
Delta.....	40	" 10..	19·93	6 60	Screw, Hopewell.
La Tour.....	70	Nov. 7..	154·43	20 32	" St. John.
Ouangondy.....	208	" 8..	294·75	31 52	Paddle, ferry, St. John.
		1901.			
Storm King.....	40	Feb. 20..	107·87	16 64	Screw, pass., St. John.
E. Ross.....	40	Mar. 8..	29·63	7 40	" ferry "
Wm. H. Murray.....	40	" 21..	72·55	10 84	" pass. "
Northumberland.....	350	" 28..	1255·46	108 40	Twin-screw, pass., North'd Straits.
Jacques Cartier.....	300	" 28..	379·96	38 40	Paddle " "
Princess.....	350	" 28..	541·79	51 36	Screw " "
Fanchon.....	40	April 5..	110·61	16 88	Paddle " St. John.
Hampstead.....	150	" 6..	234·52	26 80	Screw " "
Springfield.....	170	" 4..	212·73	26 64	Stern-wheel " "
Star.....	300	" 16..	461·03	44 88	Paddle " "
Maggie Miller.....	150	" 20..	104·66	16 40	" ferry, Millidgeville.
Clifton.....	200	" 19..	138·21	19 04	Screw, pass., St. John.
David Weston.....	450	" 6..	765·15	69 20	Paddle " "
May Queen.....	321	" 18..	539·40	51 12	" " "
Victoria.....	680	" 19..	1001·93	88 16	" " "
Bismark.....	40	" 19..	49·04	8 92	" " "
Viking.....	150	" 30..	127·70	18 24	Screw " St. Croix.
Flushing.....	140	May 10..	177·65	22 24	" " St. John.
Electra.....	40	" 14..	106·96	16 56	" " Charlottetown, P.E.I.
Alameda.....	40	" 15..	62·59	10 04	" " "
Elfin.....	70	" 15..	122·42	17 76	Paddle, ferry " "
Montague.....	75	" 14..	129·55	18 32	" " Georgetown, P.E.I.
Frank C. Batt.....	40	" 16..	32·90	7 64	Screw " Summerside "
Prince Rupert.....	850	" 21..	1158·44	100 64	Paddle, pass., St. John.
Lillie.....	65	" 21..	71·64	10 76	Screw " "
Victor.....	35	June 20..	45·51	8 68	Paddle " Campbellton.
Mary Odell.....	90	" 20..	28·92	7 32	Screw " Dalhousie.
Nyanza.....	150	" 21..	83·21	11 64	" " Bathurst.
Lady Dufferin.....	40	" 21..	47·48	8 76	Paddle, ferry, Newcastle.
Rustler.....	200	" 21..	101·54	16 16	" pass. "
Nelson.....	100	" 22..	64·34	10 12	Screw " Chatham.
Miramichi.....	100	" 22..	75·18	11 00	" " "
St. George.....	200	" 22..	277·78	30 24	Paddle " "
Sybella, II.....	40	" 22..	70·68	10 68	" ferry "
Marietta.....	25	" 22..	7·04	5 56	Screw, pass. "

I. J. OLIVE,  
Hull Inspector, &c.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended June 30, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and where employed.
		1900		\$ cts.	
Rose Standish .....	325	Aug. 9.	384·93	38 80	Paddle, passenger, Calais, Me.
General Leavitt. ....	40	" 8..	22·65	6 84	Screw " Lubec "
Lubec .....	95	" 8..	50·94	9 08	" " " "
Jeanette .....	105	" 9..	73·64	10 92	" " Calais "
Alice .....	45	" 8..	12·14	5 96	" " Eastport, Me.
St. Croix.....	400	Dec. 9..	1,993·58	167 52	" " St. John & Boston
		1901			
Cumberland .....	550	Mar. 5..	1,605·82	136 48	Paddle " "
State of Maine.....	550	June 6..	1,409·99	120 80	" " " "
Lubec. ....	95	" 7..	50·94	9 08	Screw " Lubec, Me.

I. J. OLIVE,  
Hull Inspector, &c.

STEAM Vessels not Inspected for the Year ended June 30, 1900.

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION. ,

Name of Vessel.	Gross Tonnage.	Registered Tonnage.	Remarks. — Why not inspected and class of vessel.
Hillsborough.....	228·17	66·13	Not applied for ; paddle, passenger.
Southport .....	239·92	156·13	" " "
St. Nicolas .....	62·20	42·30	Not in Port ; screw.
Wm. Aitken.....	74·87	51·19	Not ready "
Eva .....	18·01	12·25	Not applied for ; screw.
Total .....	623·17	328·00	

I. J. OLIVE,  
Hull Inspector, &c.



64 VICTORIA, A. 1901

## STEAM Vessels Inspected for the year ended June 30, 1900.

## BRITISH COLUMBIA DIVISION.

## BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fee Paid.	REMARKS.
		1899.		\$ cts.	
Flyer.. . . .		July 4..	47·64	8 84	Screw tug.
Star.. . . .		" 5..	13·50	6 04	" "
St. Clair.. . . .		" 4..	68·12	10 44	" "
Olive.. . . .		" 4..	71·32	10 68	Stern-wheel freight.
Selkirk.. . . .		" 11..	58·49	9 64	" " yacht.
Duchess.. . . .	40	" 12..	145·48	19 60	" " freight and passenger.
Hyak.. . . .	20	" 13..	39·04	8 12	" " " "
Victoria.. . . .	30	" 14..	106·60	16 56	" " " "
Archer.. . . .		" 15..	15·32	6 20	Screw tug.
Lardeau.. . . .	15	" 15..	9·60	5 80	" passenger.
Slocan.. . . .	300	" 16..	578·03	54 24	Stern-wheel freight and passenger.
Wm. Hunter.. . . .	25	" 16..	50·67	9 08	Twin screw " "
Sandon.. . . .	50	" 17..	96·22	12 68	Screw " " "
Alert.. . . .	12	" 17..	3·11	5 24	" passenger.
International.. . . .	300	" 18..	525·55	50 08	Stern-wheel, freight and passenger.
Rossland.. . . .	300	" 18..	883·55	78 72	" " " "
Illicillewaet.. . . .	30	" 18..	97·92	12·84	" " " "
Kokanee.. . . .	200	" 19..	347·50	35 84	" " " "
Surprise.. . . .		" 19..	14·80	6 12	Screw tug.
Alberta.. . . .	200	" 19..	508·15	48 64	Stern-wheel, freight and passenger.
Kaslo.. . . .		" 20..	51·17	9 08	Screw tug.
Moyie.. . . .	250	" 20..	834·81	74 80	Stern-wheel, freight and passenger.
Angerona.. . . .		" 20..	13·79	6 12	Screw tug.
Marion.. . . .	15	" 20..	14·78	6 20	Stern-wheel, freight and passenger.
Ymir.. . . .		" 20..	69·74	10 60	Screw tug.
Denver.. . . .		" 20..	8·51	5 72	" " "
Hercules.. . . .	50	" 21..	64·68	10 20	" " freight and passenger.
Nelson.. . . .	125	" 21..	496·01	47 68	Stern-wheel, " "
Kootenay.. . . .	300	" 21..	1,117·09	97 36	" " " "
Lytton.. . . .	100	" 21..	451·66	44 16	" " " "
Minto.. . . .	250	" 21..	828·91	74 32	" " " "
Trail.. . . .	50	" 21..	662·77	61 04	" " " "
Red Star.. . . .		" 22..	14·81	6 20	Screw tug.
Haylis.. . . .		" 23..	43·81	8 52	" " "
Columbia.. . . .		" 23..	49·84	9 00	" " "
Penticton.. . . .		" 24..	49·69	9 00	Twin screw tug.
Aberdeen.. . . .	250	" 24..	554·04	52 32	Stern-wheel, freight and passenger.
Maude Moore.. . . .		" 25..	8·64	5 72	Screw, yacht.
Louise.. . . .		" 26..	3·00	5 24	" " "
Ethel Ross.. . . .	12	" 28..	82·05	11 56	Stern-wheel, freight and passenger.
Thompson.. . . .		" 28..	149·80	20 00	" " freight.
Bristol.. . . .		Aug. 1..	1,983·15	166 64	Screw, freight.
Joan.. . . .	400	" 3..	821·21	73 68	Twin screw, freight and passenger.
Islander.. . . .	500	" 7..	1,495·09	127 60	" " " "
Albion.. . . .	30	" 9..	88·11	12 04	Screw, freight and passenger.
Defiance.. . . .	39	" 9..	89·88	12 20	" " " "
Clayoquot.. . . .	12	" 9..	87·18	11 96	" " " "
Mamie.. . . .	12	" 21..	89·60	12 20	" " " "
Danube.. . . .	300	" 23..	886·89	78 96	" " " "
Empress.. . . .		" 24..	3·39	5 24	Screw, tug.
Willapa.. . . .	100	" 9..	373·09	37 84	" freight and passenger.
Sunbury.. . . .	20	June 26..	37·72	8 04	" " "
Queen City.. . . .	100	Sept. 11..	391·21	39 28	" " "
Tees.. . . .	125	" 12..	679·15	62 32	" " "
Belle.. . . .	12	" 13..	66·62	10 36	" " "
Royal City.. . . .	39	Aug. 10..	200·46	24 00	Stern-wheel, freight and passenger.
Mystery.. . . .	20	Sept. 20..	64·80	10 20	Screw, freight and passenger.
Pilot.. . . .	22	" 19..	279·05	30 32	" " "
Senator.. . . .	30	" 15..	27·63	7 24	" " "
Leonora.. . . .		" 20..	33·00	7 64	Screw, tug.



## SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—British Columbia Division—*Continued.*BOILERS AND MACHINERY—*Continued.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1899.		\$ cts.	
Tyee.....		Sept. 21..	31·53	7 56	Screw, tug.
Fraser.....		" 22..	36 20	7 88	" freight.
Alpha.....	400	April 13..	653·46	8 00	Screw f. & p., spec'l insp. for incr. of p.
Etta White.....	15	Oct. 12..	97·35	12 76	" "
Hattie Young,.....	39	" 13..	131·75	18 56	Stern wheel "
Mable.....		" 14..	5·28	5 40	Screw tug.
Charmer.....	500	" 26..	1,044·41	91 52	" freight and passenger.
Kildonan.....		Nov. 14..	51·41	9 08	" tug.
Hong Kong.....		" 14..	35·76	7 88	" "
Halifax.....		" 15..	28·19	7 24	" "
Saturna.....		" 15..	22·05	6 76	" "
Maude.....		" 21..	174·99	22 00	" freight.
Delta,.....		" 22..	25·20	7 00	" "
Princess Louise.....	98	Dec. 13..	931·76	82 56	Paddle freight and passenger.
Active.....	20	Jany. 3..	171·74	21 76	Screw "
		1900.			
Staffa.....		June 26..	51·30	9 08	" freight.
Bonanza.....		Jany. 3..	109·04	22 44	" " two years dues.
Swan.....		" 4..	16·65	7 72	" tug "
Alarm.....		" 5..	33·91	7 72	" "
Sadie.....	25	" 10..	49·30	8 92	" freight and passenger.
J. L. Card.....		" 19..	141·06	16 28	" freight.
Vulcan.....		" 26..	76·79	11 16	" tug.
Brunette.....		" 26..	37·03	7 96	" "
Iris.....		" 26..	37·70	8 04	" "
Esperanza.....		Feb. 5..	30·88	7 48	" "
Stella.....		" 6..	16 32	6 28	" "
Alice.....		" 6..	34·62	7 80	" freight.
Robt. Dunsmuir.....	50	" 6..	231·75	26 56	Twin screw freight and passengers.
Autolycus.....	10	" 7..	25·47	7 00	Screw "
Capilano.....	25	" 16..	231·14	26 48	" "
Coquitlan.....	75	" 17..	256·33	28 48	" "
Lorne.....	20	" 23..	287·96	31 04	" "
Ba. Boscowitz.....	125	" 27..	337·92	35 04	" "
Alpha.....	268	Mar. 3..	653·46	60 24	" "
Tepic.....	15	" 5..	70·87	10 68	" "
Selkirk.....	35	" 5..	141·63	19 36	" "
Czar.....		" 6..	152·18	17 16	" tug.
Chieftain.....		" 14..	64·80	10 20	" "
Lois.....	10	" 16..	25·15	7 00	" freight and passenger.
Defiance.....	39	" 16..	89·88	12 20	" "
Burt.....	25	" 17..	50·41	9 00	Twin screw "
Comox.....	140	" 17..	101·17	16 08	Screw "
Constance.....	12	" 20..	49·52	9 00	" "
Thistle.....		Feb. 27..	222·36	25 76	" "
Amur.....	228	Mar. 9..	907·17	80 56	" "
Troubadour.....		" 23..	17·61	6 44	" tug.
Iroquois.....	39	April 1..	195·49	23 60	" freight and passenger.
Vera.....		" 5..	5·86	5 48	" tug.
Native.....		" 6..	51·51	9 16	" "
Courser.....	39	" 6..	160·79	20 88	Stern wheel freight and passenger.
Winetta.....		" 11..	23·53	6 92	Screw tug.
Hope.....	12	" 21..	78·49	11 32	" freight and passenger.
Royal City.....	39	" 25..	200·46	24 00	Stern wheel "
North Vancouver.....	144	May 5..	103·83	16 32	Screw "
R. P. Rithet.....	81	" 10..	816·69	73 36	Stern wheel "
Argenta.....	40	" 16..	206·32	24 48	" "
Mermaid.....	100	" 19..	128·55	18 32	Twin screw "
Alert.....		" 19..	43·81	8 52	Screw tug
Swan.....		" 19..	12·27	5 96	" "



64 VICTORIA, A. 1901

STEAM Vessels Inspected, &c.—British Columbia Division—*Concluded.*

BOILERS AND MACHINERY—*Concluded.*

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1900.		\$ cts.	
Yosemite.....	500	May 19..	1,525·03	130 00	Paddle freight and passenger.
Oscar.....		" 26..	95·42	12 60	Screw freight.
Glenora.....	100	" 28..	542·15	51 36	Stern wheel freight and passenger.
Vancouver.....		" 30..	49·96	9 00	Screw tug.
Bessie.....		Mar. 1..	10·90	5 88	" "
Bristol.....	30	June 9..	1,983·15	166 64	" freight and passenger.
Daisy.....		Mar. 28..	60·10	9 80	" tug.
City of Nanaimo.....	500	June 22..	761·37	68 88	Twin screw freight and passenger.
Sunbury.....		" 23..	37·72	8 04	Screw tug.
Cleeve.....		" 26..	35·94	7 88	" " [\$8 of amount are special
Monte Christo.....	60	" 24..	265·77	37 28	Stern wheel fg't. & p. inspect. fees.]
			32,335·01	3,358 80	

J. A. THOMSON,  
*Steamboat Inspector, Victoria, B.C.*

STEAM Vessels Inspected in Canada, but Registered elsewhere, for the Year ended June 30, 1900.

BRITISH COLUMBIA DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessels and where employed.
				\$ cts.	
City of Puebla... ..	511	July 9..	2,623·88	217 92	Screw, freight and pass., North Pacific
Flirt.....		" 19..	3·58	5 32	yacht, Kootenay Lake.
Garland.....	50	Aug. 6..	166·61	21 36	" freight and pass., Puget Sound
Rosalie.....	127	" 10..	318·51	33 52	" " Alaska & Victoria
Dirigo.....	240	" 20..	843·55	75 52	" " " "
Victorian.....	500	" 29..	1,503·64	128 32	" " Puget Sound
Milos.....	962	Apr. 21..	2,706·00	224 48	" " Pacific Ocean
Walla Walla.....	401	May 9..	3,069·76	253 60	" " " "
City of Seattle.....	592	" 12..	1,411·05	120 88	" " Alaska & Victoria
Queen.....	402	June 5..	2,727·80	226 24	" " " "
Umatilla.....	106	" 13..	3,069·76	253 60	" " North Pacific
North Pacific.....	200	" 16..	488·73	47 12	Paddle " Puget Sound
Cottage City.....	273	" 18..	1,885·11	158 80	Screw " Alaska & Victoria
Total.....			20,817 98	1,766 68	

J. A. THOMSON,  
*Steamboat Inspector, Victoria, B.C.*



## SESSIONAL PAPER No. 21

STEAM Vessels not Inspected for the Year ended June 30, 1900.

## BRITISH COLUMBIA DIVISION.

Name of Vessel.	Gross Tonnage.	Register- ed Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
Horsa .....	741·00	459·00	Freight and passenger, taken to Mexico.
City of Tipella.. ..	18·89	12·01	Fishing tug, no application.
Willie.....	82·60	55·94	Freight and passenger, no application.
Water Lilly.....	73·81	50·20	Water boat, no application.
Mist .....	28·64	19·50	Tug, laid up.
Rothsay.....	553·11	318·46	Freight and passenger, laid up.
Lottie.....	29·24	11·12	Tug, no application.
Mischief.....	65·49	44·54	Sold to United States.
Casca.....	589·73	455·15	Freight and passenger, laid up.
Total . . . . .	2,182·51	1,455·92	

J. A. THOMSON,  
*Steamboat Inspector, Victoria, B.C.*



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the year ended June 30, 1900.

BRITISH COLUMBIA AND YUKON DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.		Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1899.			\$ cts.	
Joseph Clossett.....	100	July	1..	147·05	19 76	Yukon river, freight and passenger.
Columbian.....	200	"	4..	716·42	65 28	" "
Clara .....		"	5..	144·48	19 56	" freight.
Gov. Pingree .....	230	"	6..	466·03	45 28	" freight and passenger.
Victorian.....	200	"	7..	716·39	65 28	" "
Flora.....	75	"	7..	100·93	16 08	" "
Canadian.....	200	"	11..	716·42	65 28	" "
Florence S.....	50	"	11..	100·20	16 00	" "
Gold Star.....	135	"	12..	168·36	21 47	" "
Ora .....	75	"	19..	100·93	16 08	" "
W. K. Meristine....	90	"	19..	229·00	26 32	" "
Yukoner.....	250	"	22..	781·31	70 48	" "
Lightning .....	45	"	29..	556·91	52 56	" "
Philip B. Lowe .....		Aug.	7..	466·03	45 28	" "
Willie Irving.....	100	"	3..	101·90	16 16	" "
		1900.				
Chehalis.....	15	May	4..	53·75	10 76	British Columbia waters, tug and pass.
Swan.....		Not issued		36·32		" " tug.
*Nora .....		May	23..	19·43	8 20	" " "
*Advance.....		"	23..	35·75	10 76	" " "
San Juan .....		"	26..	21·40	6 68	" " "
*Strathcona.....	200	"	24..	596·28	103 40	Skeena river, freight and passenger.
Florence.....		"	26..	30·41	7 40	British Columbia waters, tug.
Donney.....		June	7..	14 64	6 17	" "
Dreadnought .....		"	11..	32·84	7 64	" "
Spray .....		"	13..	7·36	5 64	Yacht.
Delta.....		"	14..	14·90	6 20	British Columbia waters, tug.
Erie.....		"	14..	26·74	7 16	" "
Nagasaki.....		"	14..	15·13	6 28	" "
Stranger .....		"	14..	21·26	6 68	" "
May Queen. ....		"	15..	14·10	6 12	" "
North Star.....		"	18..	8·11	5 64	" "
Wellington.....		"	15..	16·03	6 28	" "
Magnet .....		"	18..	23·72	6 92	" "
Clara T. Young.....		"	18..	30·75	7 48	" "
Reliance.....		"	18..	36·14	7 88	" "
Starling .....		"	20..	7·67	5 64	" "
Winnefred.....		"	20..	12·97	6 04	" "
Beaver .....	150	"	18..	545·44	51 60	Fraser river, freight and passenger.
Ramona .....	75	"	18..	250·79	28 08	" "
Transfer.....	120	"	20..	264·16	29 12	" "
Surrey.....	50	"	23..	263·26	29 04	" ferry.
Sea Gull.....	12	"	30..	2·52	5 24	Burrard Inlet, passenger.
Champion .....		"	28..	99·54	13 00	British Columbia waters, freight.
Fearless .....		"	29..	52·97	9 24	" " tug.
Totals..				8,065·75	971 16	

\*These steamers paid for two years.

F. N. RICHARDSON, R.N.P.,  
Steamboat Inspector, Vancouver.



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended June 30, 1900.

BRITISH COLUMBIA AND YUKON DIVISION.

BOILERS AND MACHINERY.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Remarks.
		1900.		\$ cts.	
Louise .....	70	July 7..	717·19	65 43	Freight and passenger, Yukon River
Susie .....	225	17..	1,211·28	104 88	" " "
John Cudahay .....	190	19..	819·64	73 60	" " "
Portius B. Wear .....	185	20..	400·00	40 00	" " "
Mary F. Graff .....	190	21..	719·42	65 52	" " "
John J. Healey .....	220	21..	550·00	52 60	" " "
T. C. Powers.....	120	22..	819·64	73 60	" " "
Hannah.....	200	24..	1,211·28	104 88	" " "
St. Michaels.....	170	25..	718·69	65 52	" " "
Monarch .....	190	27..	463·16	45 04	" " "
Robert Kerr.....	180	Aug. 2..	718·68	65 62	" " "
Sarah .....	225	4..	1,211·28	104 88	" " "
Leah .....	115	4..	477·89	46 24	" " "
Linda .....	190	5..	692·40	63 36	" " "
Sovereign.....	125	8..	326·41	54 08	" " "
Milwaukie.....	125	8..	396·22	39 68	" " "
Lotta Talbot.....	29	16..	342·92	35 36	" " "
Seattle No. 3. ....	160	8..	548·12	51 84	" " "
		1901.			
Tartar.. .....	950	May 11..	4,425·00	362 00	Freight and pass., Canada & foreign.
Total .....			16,769·22	1,513 53	

F. N. RICHARDSON, R. N. R.,  
Steamboat Inspector, Vancouver.

STEAM Vessels not Inspected for the Year ended June 30, 1900.

BRITISH COLUMBIA AND YUKON DIVISION.

Name of Vessel.	Gross Tons.	Registered Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
Westminster.....	18·00	14 00	Laid up.
Caledonia.....	569·00	358 00	Out of reach.
Morris.....	11·66	.. ..	"
Fingal.....	90·69	59 75	To be inspected later.
Clansman.....	72·40	.....	" "
City of Tipella .....	18·89	.....	" "
On Time.....	10·70	.....	" "
Total.....	791·34		

F. N. RICHARDSON, R. N. R.,  
Steamboat Inspector, Vancouver.



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the Year ended June 30, 1900.  
BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passengers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900.			
Bristol.....	None.....	Aug. 1..	1,983·15	166 64	Screw, freight.
Joan.....	400	" 3..	821·21	73 68	" " and passenger.
Islander.....	500	" 7..	1,495·09	127 60	Twin screw, freight and passenger.
Clayoquot.....	12	" 9..	87·18	11 96	Screw " "
Albion.....	30	" 9..	88·11	12 04	" " "
Defiance.....	39	" 9..	89·88	12 20	" " "
		1899.			
Transfer, No. 1.....	120	Aug. 26..	772·86	10 00	Scow " "
		1900.			
Mamie.....	12	Aug. 21..	89·60	12 20	Screw " "
Danube.....	300	" 23..	886·89	78 96	" " "
Willapa.....	100	" 9..	373·09	37 84	" " "
Queen City.....	100	Sept. 11..	391·21	39 08	" " "
Tees.....	125	" 12..	679·15	62 32	" " "
Belle.....	12	Aug. 6..	66·62	10 36	" " "
Royal City.....	39	" 10..	200·46	24 00	Stern wheel " "
Senator.....	30	Sept. 15..	27·63	7 24	Screw ferry " "
Pilot.....	22	" 19..	279·05	30 32	" tug " "
Mystery.....	20	" 20..	64·80	10 20	" " "
Sunbury.....	20	June 26..	37·72	8 08	" freight " "
Alpha.....	400	Sept. 9..	653·46	8 00	Special " "
Etta White.....	15	Oct. 12..	97·35	12 76	Screw, tug " "
Hattie Young.....	39	" 13..	131·75	18 56	Stern wheel, freight " "
Charmer.....	500	" 26..	1,044·41	91 52	Screw " "
Maude.....	None.....	Nov. 21..	174·99	22 00	" " "
Princess Louise.....	98	Dec. 13..	931·76	82 56	Paddle " "
		1901.			
Active.....	20	Jan. 3..	171·74	21 76	Screw, tug " "
Sadie.....	25	" 10..	49·30	8 92	" " "
Robert Dunsmuir.....	50	Feb. 7..	231·75	26 56	Twin screw, freight " "
Autolycus.....	10	" 7..	25·47	7 00	Screw " "
Capilano.....	25	" 16..	231·14	26 48	" " "
Coquitlam.....	75	" 17..	256·33	28 48	" " "
Lorne.....	20	" 23..	287·96	31 04	" tug " "
Barbara Boscowitz.....	125	" 27..	337·92	35 04	" freight " "
Alpha.....	268	Mar. 3..	653·46	60 24	" " "
Tipic.....	15	" 5..	70·87	10 68	" tug " "
Selkirk.....	35	" 5..	141·63	19 36	" freight " "
Amur.....	228	" 9..	907·17	80 86	" " "
Lois.....	10	" 16..	25·15	7 00	" tug " "
Burt.....	25	" 17..	50·41	9 00	" freight " "
Comox.....	140	" 17..	101·17	16 08	" " "
Thistle.....	50	" 27..	222·36	25 76	" " "
Constance.....	12	" 20..	49·52	9 00	" tug " "
Defiance.....	39	" 16..	89·88	12 20	" freight " "
Iroquois.....	39	Apr. 1..	195·49	23 60	" " "
Courser.....	39	" 6..	160·79	20 88	Stern wheel " "
Hope.....	12	" 21..	78·49	11 32	Screw, tug " "
Royal City.....	40	" 25..	200·46	24 00	Stern wheel, freight " "
Chehalis.....	15	May 1..	53·75	9 32	Screw, tug " "
North Vancouver.....	144	" 4..	103·83	16 32	" freight " "
R. P. Rithet.....	81	" 10..	816·69	73 36	Stern wheel " "
Yosemite.....	500	" 19..	1,525·03	130 00	Paddle " "
Mermaid.....	100	" 19..	128·55	18 32	Twin screw, tug " "
Glenora.....	100	" 23..	542·15	51 36	Stern wheel, freight " "
Bristol.....	30	June 9..	1,983·15	166 64	Screw " "
Surrey.....	50	" 19..	263·26	29 04	Paddle " "
Ramona.....	75	" 19..	250·79	28 08	Stern wheel " "
Transfer.....	120	" 20..	264·16	29 12	" " "
Beaver.....	150	" 25..	545·44	51 60	" " "
Monte Christo.....	60	" 24..	265·77	27 28	" " "
City of Nanaimo.....	500	" 22..	761·37	68 80	Twin screw " "

R. COLLISTER, *Hull Inspector.*



SESSIONAL PAPER No. 21

STEAM Vessels Inspected in Canada but Registered elsewhere, for the Year ended  
June 30, 1900.

BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1900.		\$    cts.	
City of Puebla.....	511	July 9..	2,623·88	217 92	Screw, Canadian and foreign ports.
Garland .....	50	Aug. 6..	166·61	21 36	"        "        "
Rosalie. ....	127	" 10..	318·51	33 52	"        "        "
Dirigo. ....	240	" 20..	843·55	75 52	"        "        "
Victorian. ....	500	" 29..	1,503·64	128 32	"        "        "
		1901.			
Milos.....	962	April 21..	2,706·00	224 48	"        "        "
Walla Walla.....	401	May 9..	3,069·76	253 60	"        "        "
Tartar. ....	950	" 11..	4,425·00	360 00	"        "        "
City of Seattle.....	502	" 12..	1,411·05	120 88	"        "        "
Queen.....	402	June 5..	2,727 80	226 24	"        "        "
Umatilla. ....	400	" 13..	3,069·76	253 60	"        "        "
North Pacific.....	200	" 16..	488·73	47 12	Paddle        "        "
Cottage City.....	273	" 18..	1,885·11	158 80	Screw        "        "

R. COLLISTER,  
*Hull Inspector.*

STEAM Vessels not Inspected for the Year ended June 30, 1900.

BRITISH COLUMBIA DIVISION.

HULL INSPECTION.

Name of Vessel.	Gross Tonnage.	Reg- istered Tonnage.	Remarks.  Why not inspected and class of Vessel.
Horsa. ....	741·00	459·00	Freight and pass., taken to Mexico.
Willie.....	82·60	55·94	"        no application.
Rothestay. ....	553·11	348·46	"        laid up.
Caska.....	589·73	455·15	"        "
Telephone.....	80 66	50·82	"        no application.
Cutch. ....	675·85	363·66	"        to be inspected, when she returns to Vancouver.
Mischief.....	65·49	44·54	Freight and pass., sold to United States.

R. COLLISTER,  
*Hull Inspector.*



64 VICTORIA, A. 1901

STEAM Vessels Inspected for the Year ended June 30, 1900.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and Inspection Fees Paid.	Class of Vessel and where employed.
		1900		\$ cts.	
City of Alberton.....	40	May 30..	67.72	10 44	Screw, pass. & frt., Lake of the Woods.
Maple Leaf.....	40	July 4..	81.84	11 56	" " Rat Portage & Ft. Francis
Ethel.....		" 10..	20 20	6 60	" tug, Lake of the Woods.
Undine .....		" 8..	9.46	5 72	" priv. yacht, Lake of the Woods
Queen.....		" 10..	31.56	7 56	" tug " "
Squaw.....	15	" 15..	21.60	6 76	" pass. & frt. " "
Majestic.....	40	" 22..	135.22	15 80	" " Rainy Lake.
Mohican.....		Not issued	34.20	8 34	" tug " "
Gale.....		"	2.62	5 24	" " Grassy Lake
May Carter.....		"	6 12	5 48	" " Bad Vermillon Lake.
Rover.....		July 20..	7.82	5 64	" " Rainy Lake.
Minnewaukie.....		Not issued	4.61		" yacht pass., Banff Park.
Otter.....		"	78.99	11 32	Stern paddle, tug, Saskatchewan Riv.
Minnow.....		"	20.05	6 60	" " " "
Ethel Barming .....		Aug. 12..	37.54	8 04	Screw, tug, Lake of the Woods.
Cruiser.....		" 14..	26.92	7 16	" " " "
Widgeon.....		May 30..	2.29	5 16	" " " "
Aurora.....		Not issued	224.50		Side paddle, tug, Lake Winnipeg.
Silver Spray.....		"	1.53		Screw, pass., Pellican Lake.
Lady Allen.....		Aug. 30..	18.57	6 52	" fish tug, Lake Winnipegosis.
Ospray.....		Sept. 8..	21.22	6 68	" " " "
Mocking Bird.....		" 9..	38.02	8 04	" " " "
Iona.....		" 12..	39.15	8 12	" " " "
Petrel .....		" 12..	166.98	18 36	" freight, Lake Manitoba.
Isabell.....		Jan. 30..	60.90	9 88	" fish tug " "
William Cross.....		Sept. 20..	21.66	6 76	" tug, Lake Manitou
Rocket.....		" 14..	55.61	9 48	" fish tug, Lake Winnipeg.
Minneola.....		Not issued	9.20		" " Lake Manitou.
Dolphin.....		Sept. 21..	12.63	6 04	" tug, Lac des Mille Lacs.
Rambler.....		" 30..	6.14	5 80	" " " "
Sport .....		Oct. 9..	16.26	6 28	" " Winnipeg River.
		1901			
Phantom.....		April 18..	55.86	9 48	Screw, ferry, Rat Portage & Keewatin.
Balmoral.....	30	" 26..	36.94	7 96	" pass. & frt., Lake of the Woods
Monarch.....		" 20..	113.09	14 04	Side-paddle, tug, " "
Ethel Barming.....		" 20..	37.54	8 04	Screw, tug " "
Catherine S.....	35	" 26..	66.60	10 36	" pass. " "
Keenora.....	500	May 1..	486.34	46 88	" " Rat Portage & Ft. Francis.
Lotta S.....	15	April 26..	48.03	8 84	" " Lake of the Woods.
Cruiser.....		" 30..	26.92	7 16	" tug " "
Kenmina.....		" 30..	41.86	8 36	" " " "
Mikado.....	10	" 30..	24.92	7 00	" pass. & frt. " "
Josie.....		" 30..	12.42	5 96	" tug " "
Alma T .....		" 30..	15.78	6 28	" " " "
Spray .....		" 27..	8.96	5 72	" fish tug " "
Undine .....		" 28..	9.46	5 72	" private yacht " "
Heather Bell.....	20	" 28..	21.18	6 68	" pass. & frt. " "
Clipper.....	40	May 1..	52.95	9 24	" " " "
City of Selkirk.....	75	" 14..	457.82	44 64	" " Lake Winnipeg.
Rocket.....		" 14..	55.61	9 48	" fish tug " "
Idell.....		" 14..	53.92	9 32	" " " "
Sultana .....		Not issued	277.75		" pass. & frt. " "
Lady of the Lake.....	20	May 14..	201.43	24 08	" " " "
Premier.....	60	" 14..	413.99	41 12	" " " "
Fisherman.....		" 14..	44.22	8 52	" fish tug " "
Highlander.....		" 14..	58.84	9 72	" " " "
Angler.....		" 14..	16.16	6 28	" " " "
Frank Burton.....	10	" 14..	52.00	9 16	" pass. & frt. " "
quaw.....		" 14..	40.28	8 20	" " Rat Port. & Ft. Francis



SESSIONAL PAPER No. 21

STEAM Vessels Inspected, &c.—Keewatin, Manitoba and North-West Territories  
Division—*Concluded.*

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1901		\$ cts.	
Sultana.....		May 2..	3 35	5 24	Screw, priv. yacht, Lake of the Woods.
Daisy Moore.....		" 3..	38 31	8 04	" tug "
Keewatin.....		" 5..	41 25	8 28	" " "
Shamrock. ....	40	" 3..	79 84	11 40	Screw, pass., Lake of the Woods.
Mary Hatch . . .		" 4..	121 18	14 68	" tug " "
Maple Leaf.....	40	" 12..	81 84	11 56	" pass., Rat Port'ge & F. Francis
Chieftain. ....		" 12..	36 26	7 88	" tug, Lake of the Woods.
Queen.....		" 12..	31 65	7 56	" " " "
Empress.....		" 14..	129 28	15 32	" " " "
Pastime.....		June 5..	4 00	5 32	" priv. yacht, Lake of the Woods
Rambler.....	30	" 22..	25 83	7 08	" tug, Lake of the Woods.
Hudson Bay Messenger		" 22..	5 29	5 40	" priv. yacht, Lake of the Woods
Gertie H.....	150	" 5..	90 95	15 28	Stern paddle, Red River.
Chieftain.....		Not issued	60 85	.....	Screw. tug, Lake Winnipeg.
Miles.....		June 31..	63 04	10 04	" " " "
Villeneuve.....	30	" 31..	27 56	7 24	" pass., Lake of the Woods.
Gordon M.....		" 5..	3 01	5 24	" tug " "
W. C. Van Horn.....		" 7..	59 91	9 80	" " " "
Irène.....	20	" 7..	9 71	5 80	" pass. " "
Princess.....		" 7..	7 83	5 64	" tug " "
Gale.....		" 14..	2 62	5 24	" " Grassy Lake.
May Carter.....		" 14..	6 12	5 48	" " Bad Vermillion Lake.
Rover.....		" 18..	7 82	5 64	" " Rainy Lake.
Mohican.....		" 18..	34 20	7 72	" " " "
Cecila B.....		" 18..	13 65	6 12	" " " "
Edna Brydges.....		Not issued	176 05	.....	" pass., Rat Port'ge & F. Francis
Pearl.....		June 21..	10 00	5 80	" tug, Lake of the Woods.
Argyle.....		Not issued	77 70	.....	" ferry, Rat Portage & Keewatin
Total.....			5,257 80	760 42	

GEO. P. PHILLIPS,  
*Steamboat Inspector, Rat Portage.*

STEAM Vessels Inspected in Canada but registered elsewhere, for the Year ended  
June 30, 1900.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Number of Passen- gers Allowed.	Date Certificate Expires.	Gross Tons.	Tonnage Dues and In- spection Fees Paid.	Class of Vessel and where employed.
		1900		\$ cts.	
Seagul.....	33	July 20..	12 00	5 96	Screw, Rainy Lake, passenger.

GEO. P. PHILLIPS,  
*Steamboat Inspector, Rat Portage.*



64 VICTORIA, A. 1901

STEAM Vessels not Inspected, for the Year ended June 30, 1900.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

BOILERS, MACHINERY AND HULL INSPECTION.

Name of Vessel.	Gross Tons.	Register- ed Tonnage.	Remarks. — Why not Inspected and Class of Vessel.
Sparrow .....	49·28	27·90	Screw, pass., McKenzie river, too far to go.
Wrigley.....	104·59	66·92	" " "
St. Alphonse.. ..	24·94	14·92	" " "
Graham .....	360·19	223·51	Stern paddle, pass., Slave river, "
St. Joseph.....	27·06	16·06	Side " " "
Alpha.....	7·50	4·98	Screw, pass., " "
Lillian B. ....	4·05	1·80	" " " "
Athabasca .....	166·73	125·85	Stern paddle, pass., Athabasca river., "
D. L. Mather .....	103·32	70·26	Screw, not in commission.
Mimitonka .....	68·34	46·47	" " "
Lily.....	1·61	1·01	" " "
May.....	11·08	7·12	" " "
Gem. ....	11·08	7·20	" " "
Unia. ....	19·42	11·50	Stern paddle, " "
Aurora. ....	224·50	141·43	Side paddle, " "
Caro .....	14·47	9·84	Screw, " "
Harry Montgomery.....	3·65	2·94	" " "
Nora.....	20·23	13·67	" to be inspected.
Sunbeam .....	2·86	1·94	" " "
Beaver. ....	34·51	22·21	" " "
Ninsongus.....	7·60	5·20	" " "
Widgeon. ....	7·95	6·09	" " "
William Whyte. ....	17·81	12·36	" " "
Galetea .....	46·10	30·26	" " "
Annie Mc .....	13·42	11·10	" " "
Forrester. ....	5·23	2·83	" " "
Klondyke.....	8·05	4·00	" " "
Northern Bell. ....	6·79	3·85	" " "
Hazel .....	7·52	5·11	" " "
Circe. ....	2·83	1·95	" " "
Minnehaha. ....	2·42	·64	" " "
Zena.....	6·60	5·00	" " "
Josie. ....	25·04	16·88	" " "
Mille Howell. ....	24·11	16·39	" " "
Georgina.....	43·78	29·78	" " "
Siskewett .....	47·17	34·27	" " "
Jenny Lind.....	5·87	4·37	" " "
Mary Ann.....	86·86	57·86	" " "
James Mayhew.....	16·94	11·64	" " "
Orcadia. ....	23·16	15·51	" " "
Minota.....	34·95	23·17	" " "
Ida .....	19·37	13·57	" " "
Maud C.....	5·16	3·25	" " "
Rosey May. ....	3·64	1·74	" " "
Kate Marks .....	54·15	43·09	" " "
W. J. Akins.....	41·82	25·00	" " "
Herbert .....	21·13	9·93	" " "
Brothers .....	17·50	11·96	" " "
Total .....	1,862·38	1,225·28	

GEO. P. PHILLIPS,  
Steamboat Inspector.



SESSIONAL PAPER No. 21

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1900 ; their Class and Horse-power ; whether of Wood or Iron ; their Gross and Registered Tonnage ; where built ; and where and how employed.

Name of Vessel.	Horse-Power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
B. M. Fraser.	20·96	Screw ....	Wood ....	50	34	Owen Sound..	Georgian Bay, tug.
Annie M.....	8·16	" .....	" .....	33	22	Collingwood ..	" ..
W.E.Gladst'ne	20·96	" .....	" .....	59	40	Warton .....	" ..
W. S. Oldfield.	2·70	" .....	" .....	15	10	" .....	" ..
Van Woodland	3·33	" .....	" .....	37	24	Orillia .....	Lakes Simcoe and Couchiching, passenger.
Ladysmith....	2·70	" .....	" .....	6	4	" .....	" ..
City Queen....	10·66	" .....	" .....	69	42	Midland .....	Georgian Bay, passenger.
Dorothe .....	0·67	" .....	" .....	8	6	Penetang .....	" yacht.
Ella .....	2·13	" .....	" .....	15	10	St. Williams..	Long Point Bay, "
Majestic.....	32·66	" .....	Steel.....	275	156	Toronto .....	Montreal & vicinity, passen.
Germanic.....	71·53	" .....	Wood ....	1,014	676	Collingwood...	Collingwood and Sault Ste. Marie, passenger.
Gertie C.....	3·33	" .....	" .....	15	10	Fesserton.....	Georgian Bay, tug.
Beaver.....	8·40	" .....	" .....	29	12	Midland.....	" ..
Marguerita....	7·76	" .....	" .....	31	15	" .....	" yacht
R. A. McLean.	8·53	" .....	" .....	30	14	Not on register	Sault Ste. Marie&vicin., tug.
Minnie M.....	38·00	" .....	" .....	613	276	Detroit, Mich.	" passenger.
Helen S.....	17·36	" .....	Steel.....	86	58	Collins' Inlet..	Collins' Inlet & vicin. "
Gen. Weitzel..	4·80	" .....	Wood ....	32	24	Buffalo, N. Y..	Sault Ste. Marie&vicin., tug.
Jno. R. Arnoldi	6·53	" .....	" .....	116	68	Tenaw'da, N. Y	Goderich Harbour, dredge.
Glenora .....	1·87	" .....	" .....	17	10	Fort Erie.....	Lake Erie, fishing tug.
Total.....	273·04	.....	.....	2,560	1,511		

JOHN DODDS, }  
E. W. McKEAN. } *Toronto.*

STATEMENT of the Number of Steam Vessels added to the Dominion, &c.—Continued.

Name of Vessel.	Horse-Power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and How Employed.
Watiti.....	8·60	Screw.....	Wood ....	18·11	12·32	Kingston, Ont.	Pleasure yacht.
Victoria.....	0·83	" .....	" .....	3·90	2·66	Lindsay .....	" ..
India .....	117·60	" .....	" .....	976·49	572·82	Garden I'd ..	Great Lakes, freight boat.
Minnie May..	0·83	P'd'l.....	" .....	10·20	8·04	Coboconk ..	Balsam Lake, tug.
Jennemac.....	0·83	Screw .....	" .....	4·68	3·18	Peterboro ..	Pleasure yacht.
Empress .....	13·50	" .....	Composite	84·48	57·48	Lakefield ..	Cos. Vict. & Peterboro, pass.
Tramp.....	0·30	" .....	Wood ....	2·24	1·70	Peterboro ..	" ..
Flash.....	0·30	" .....	" .....	4·74	3·23	" .....	" ..
Dickson .....	2·70	P'd'l....	" .....	16·01	10·09	Simcoe .....	" alligator tug.
Mayflower....	0·53	Screw.....	" .....	5·99	4·08	Peterboro ..	Pleasure yacht.
Wanda.....	5·41	" .....	" .....	38·61	26·25	Kingston ..	Trenton & Prescott, passeng.
Leone.....	0·60	" .....	" .....	2·48	1·69	Rockport ..	Kingston & Prescott "
Helen.....	1·73	" .....	" .....	1·82	1·24	" .....	" ..
D. Stewart...	8·75	Non-prop.	" .....	295·21	126·35	Cardinal ..	Canal, spoon dredge.
Killarney .....	13·06	" .....	" .....	.....	.....	Welland ..	" ..
Kilkenny.....	13·06	" .....	" .....	.....	.....	Buffalo, N. Y..	" ..
Ottawa.....	6·53	" .....	" .....	219·95	129·60	Cornwall, Ont.	" ..
Ottamac .....	9·60	" .....	" .....	195·65	89·72	Montreal, Que.	" elevator dredge.
No. 4.....	6·53	" .....	" .....	175·14	102·91	" .....	" spoon dredge.
St. Louis.....	2·13	Screw .....	" .....	22·54	15·33	Kingston, Ont.	Pleasure yacht.
Rideau Queen.	22·52	" .....	" .....	350·75	159·50	" .....	Kingston & Montreal, pass.
Soucié.....	3·53	" .....	" .....	13·84	9·41	" .....	Pleasure yacht.
Total.....	239·47			2,443·10	1,373·60		

THOS. P. THOMPSON,



64 VICTORIA, A. 1901

STATEMENT of the Number of Steam Vessels added to the Dominion during the Year ended June 30, 1900, their Class and Horse-power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and where and how employed.

Name of Vessel.	Horse-Power.	Class.	Wood, Iron, or Steel.	Gross Tonnage.	Reg. Tonnage.	Where Built.	Where and how Employed.
Courier.....	2·7	Screw ....	Composite	12·48	8·49	Montreal.....	Montreal Harbour, tug.
Derrick No. 1.	9·6	Derrick...	Wood ....	100·00	.....	" .....	" " "
Dredge No. 4.	3·2	Spn dr'dge	" ....	100·00	.....	Not known....	River and Harbour, dredging.
Willie C.....	3·1	Screw ....	" ....	8·25	5·60	" .....	" " tug.
Eagle.....	1·6	" ....	" ...	12·74	8·66	St. Hyacinthe.	Yamaska River, passenger.
R. B. Flower..	2·1	" ....	" ....	14·77	10·04	Not known....	River, tug.
Hudson.....	2·4	Paddle. ..	" ....	44·81	36·51	Barry's Bay. ..	Madawaska River, passenger.
Mathilda.....	20·8	Screw ....	Steel.....	113·66	68·72	Sorel.....	St. Lawrence " tug.
Total.....	45·5			406·69	138·02		

MONTREAL.

WM. LAURIE.  
LOUIS ARPIN.

QUEBEC DIVISION STEAM VESSELS ADDED.

Name of Vessel.	Horse-Power.	Class.	Wood, Iron, or Steel.	Gross Tonnage.	Reg. Tonnage.	Where Built.	Where and how Employed.
Foam.....	2·70	Screw ....	Wood ....	15·52	6·81	Quebec, 1900..	Quebec, Harbour, tug.
Alpha.....	11·23	" ....	" ....	20·34	6·57	St. Joseph, 1900	" "
Alaska. ...	2·13	" ....	" ....	51·11	45·47	St. Nichl's, 1899	Open deck batteau used as lighter
Adriatic.....	38·29	" ....	" ....	153·03	87·29	Levis, 1900....	Ferry, pass., at Port Mulgrave.
Bella.....	5·40	Paddle. ..	" ....	42·90	29·40	Cross Pt., 1900	Ferry, pass., bet. Cross Pt., P.Q. and Campbellton, N.B.
Kathleen.....	45·20	" ....	" ....	280·38	176·64	Quebec, 1900..	Employed at quarantine service at Gross Isle.
Loon.....	5·06	Screw ....	" ....	20·96	14·25	Bristol, U.S. '93	Pleasure yacht, Quebec and Bic.
Wanderer ....	26·66	Twinscr'w	" ....	565·03	282·80	Phil'd., U.S. '79	Fgt. and pass., Mont. & Gaspé.
St. Maurice...	3·33	Screw ....	" ....	44·72	30·41	Gr'ds Piles, '00	Tug and freight, Grandes Piles and La Tuques.
Marie Alma...	5·66	Twinscr'w	" ....	52·28	35·55	Lake St. Jn, '00	Lake St. Jn., empl'd as tug and ft.
Honfleur.....	3·57	Screw ....	" ....	18·77	12·75	" " '00	" " " "
Total.....	148·03			1265·11	727·94		

JOS. SAMSON,  
*Boiler and Engine Inspector.*  
PIERRE D. BRUNELLE,  
*Hull Inspector.*



SESSIONAL PAPER No. 21

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1900, their Class and Horse power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and where and how employed.

NOVA SCOTIA DIVISION.

Name of Vessel.	Nominal Horse power.	Class.	Wood, Iron or Steel.	Gross Ton-nage.	Reg. Ton-nage.	Where Built.	Where and how employed.
Delta.....	56·55	Screw ....	Iron.. ....	873·21	549·71	Glasgow G. B..	Freight and pass. foreign.
Lady Glover..	66·60	.....	Wood *..	137·51	93·51	Preston G. B...	" " coasting.
J. L. Nelson..	8·16	.....	" ....	37·84	19·46	Yarmouth, U.S.	" " "
H. May Butler	15·20	.....	" ....	66·98	45·55	W. Mystic, "	Fishing boat "
D. H. Thomas	57·75	.....	Steel.....	211·91	144·10	Maryland, U.S.	Tug and passenger "
Tourist.....	·83	.....	Wood ....	4·42	3·33	Yarmouth, N.S.	Passen. Yarmouth Harbour
Total. ...	205·09			1331·87	855·66		

JOHN P. ESDAILE,  
*Steamboat Inspector, Halifax, N. S.*

STATEMENT of the Number of Steam Vessels added to the Dominion, &c.—*Continued.*

NEW BRUNSWICK AND P. E. I. DIVISION.

Name of Vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Ton-nage.	Reg. Ton-nage.	Where Built.	Where and how employed.
Joseph.....	16·6	Screw tug.	Wood ....	53·75	36·55	St. John, N. B.	Tug St. John River.
Lottie.....	·25	" F. Boat	" ....	5·00	5·00	Geor'to'n, P. E. I	Fish b. Georgetown, not reg-
Total. ....	16·85			58·75	41·55		

W. L. WARING,  
*Steamboat Inspector.*



64 VICTORIA, A. 1901

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1900, their Class and Horse power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and were and how employed.

BRITISH COLUMBIA DIVISION.

Name of Vessel.	Horse power.	Class.	Wood, Iron or Steel.	Gross Ton-nage.	Reg. Ton-nage.	Where Built.	Where and how employe
Flyer.....	13·5	Screw...	Wood....	47·64	32·40	Vancouver....	Cannery Service Fraser Rv.
Olive.....	3·3	Stern wh'l	"....	71·32	44·94	Westminster...	Freight " " "
Victoria.....	4·3	"	"....	106·60	67·16	Trout Lake City, B.C....	" and passenger Trout Lake, B.C.
Alert.....	1·0	Screw....	"....	3·11	2·12	New Denver, B.C.....	Passenger Slocan Lake.
Maude Moore.	1·2	"	"....	8·64	5·88	Peterborough, O	" Dog Lake.
Albion.....	24·0	"	"....	88·11	59·92	Vancouver.....	Cannery Service Fraser Rv.
Defiance.....	11·2	"	"....	89·88	61·12	Tacoma, U.S.A	Freight and passen. Inland Water, B.C.
Tyee.....	10·6	"	"....	31·53	18·45	Westminster...	Cannery Service Fraser Rv.
Mabel.....	1·0	"	"....	5·28	3·60	Vancouver.....	Tug, Logging Camps.
Vulcan..	16·6	"	"....	76·79	52·22	Westminster...	" B.C. Waters.
Iris.....	2·1	"	"....	37·70	24·20	"	" Fraser River.
Alice.....	6·0	"	"....	34·62	23·54	Vancouver.....	Fr. Inland Waters, B.C.
Iroquois.....	19·5	"	"....	195·49	94·38	Pt. Moody, B.C.	Freight and passen. Inland Waters, B.C.
Vera.....	2·4	"	"....	5·86	3·98	Birkenhead, En	Cannery Service, Skeena R.
Native... ..	13·0	"	"....	51·51	35·55	Westminster...	Tug Fraser River.
Argenta.....	4·3	Stern wh'l	"....	206·32	129·99	Kaslo, B.C....	Freight & pass. Duncan Riv.
Monte Christo.	6·6	"	"....	265·77	155·73	Pt. Essington, B.C.....	" " Skeena river
N. Vancouver.	16·5	Screw....	"....	103·83	70·60	Vancouver.....	" " Ferry Burrard Inlet.
Total....	180·1			1430·00	885·78		

J. A. THOMSON,  
Steamboat Inspector, Victoria, B. C.

STATEMENT of the Number of Steam Vessels added to the Dominion, &c.—Continued.  
BRITISH COLUMBIA AND YUKON DIVISION.

Name of Vessel.	Nomnal Horse Power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Ton-nage.	Where Built.	Where and how employed.
W. Ogilvie ...	6·6	Screw.....	Wood....	81·69	55·55	Bennett.....	Lake Bennett, freight & pass.
Zelandain ....	6·6	Stern wh'l	"....	179·82	141·18	"	Yukon River " "
J. P. Light...	26·6	"	"....	718·68	409·06	Seattle.....	" " "
Gold Star.....	6·6	"	"....	168·36	98·98	St. Michael's..	" " "
Eldorado.....	17·	"	"....	466·03	260·48	Seattle.....	" " "
Bonanza King.	17·	"	"....	466·03	260·48	Dutch Harb'r.	" " "
Clara.....	8·	"	"....	144·48	109·52	San Francisco.	" " "
Champion ....	12·9	Screw.....	"....	99·54	67·69	Vancouver....	B. Columbia waters, freight.
Sea Gull.....	2·8	"	"....	2·52	1·72	"	Burrard Inlet, passenger.
Starling ... ..	2·3	"	"....	7·67	5·22	Port Guichon.	British Columbia waters, tug.
Total ....	106·4			2,334·82	1,409·88		

F. N. RICHARDSON,  
Steamboat Inspector Vancouver.



SESSIONAL PAPER No. 21

STATEMENT of the number of Steam Vessels added to the Dominion during the Year ended June 30, 1900, their Class and Horse power, whether of Wood or Iron, their Gross and Registered Tonnage, where built, and where and how employed.

KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES.

Name of Vessel.	Nominal Horse Power.	Class.	Wood, Iron or Steel.	Gross Tonnage.	Registered Tonnage.	Where Built.	Where and how employed.
Argyle .....	16·6	Screw.....	Wood .....	77·70	53·18	Keewatin, Ont	Ferry, Rat Portage and Keewatin, Lake of the Woods.
Chieftain .....	6·3	" .....	" .....	60·85	28·32	Selkirk, Man..	Tug, Lake Winnipeg.
Nettie .....	·3	" .....	" .....	3·34	1·58	Rosport, Ont..	Fish tug, Lake Superior.
Irine .....	1·2	" .....	" .....	9·71	6·20	Rat Portage, O	Pass., Lake of the Woods.
Gertie H .....	9·6	Stern Pdle	" .....	90·95	68·79	Winnip'g, Man	" Red River.
Petrel .....	6·3	Screw.....	" .....	166·98	93·76	Westbourne "	Freight, Lake Manitoba.
Silver Spray..	·3	" .....	" .....	1·53	0·93	Brandon "	Yacht, Pelican Lake, Man.
Iona .....	3·5	" .....	" .....	39·15	24·00	Westbourne "	Tug, Lake Winnipegosis,
Rocket.....	6·3	" .....	" .....	55·61	21·05	Selkirk "	" Winnipeg.
Total .....	50·4			505·82	297·81		

GEO. P. PHILLIPS,  
*Steamboat Inspector.*

STATEMENT of Steam Vessels lost, broken up or laid up, &c.  
WEST ONTARIO DIVISION.

Name of Vessel.	Where and How last employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Niagara.....	Lakes, freight .....	468	Screw, foundered.
Ontario .....	" " .....	655	" "
R. Kendrick.....	Lake Simcoe, freight.....	15	" dismantled.
Elmer .....	Lake Huron, tug.....	38	" "
John Harrison.....	" " .....	44	" "
Frank Reid .....	" " .....	34	" "
Grace Darling.....	" " .....	26	" "
Lake Joseph .....	Muskoka Lakes, tug.....	28	" "
Susan C. Doty.....	Lake Superior, fishing tug.....	26	" "
Purvis .....	" Huron " .....	13	" "
Erastus Wiman .....	Muskoka Lakes, tug .....	54	" burned.
Sylvester.....	" " .....	27	" "
		1,428	

JOHN DODDS,  
E. W. McKEAN,  
*Toronto.*



64 VICTORIA, A. 1901

STATEMENT of Steam Vessels lost, broken up or laid up as unfit for service, in the Dominion during the Year ending June 30, 1900, and where and how employed.—*Continued.*

## EAST ONTARIO DIVISION.

Name of Vessel.	Where and How last employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Outlet Queen.....	Passenger, Rice Lake.....	18·45	Screw, hull unfit for service.
C. Here.....	" Trenton & Prescott.	7·40	" enlarged and name changed.
Sophy.....	" " ..	25·73	" injured by fire; name changed.
Miltonia.....	Pleasure yacht.....	32·18	" destroyed by fire.
		83·76	

THOS. P. THOMPSON,  
*Steamboat Inspector.*

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*

## MONTREAL DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
M. P. Davis.....	Montreal Harbour, tug.....	11·00	Screw, hull unfit for service.
Princess Louise.....	Richelieu River, passenger.....	114·88	" destroyed by fire.
J. R. Booth.....	St. Lawrence, tug.....	131·58	" hull unfit for service.
D. McLachlin .....	Chats Lake warp tug.....	22·08	Paddle " "
		279 54	

WM. LAURIE,  
LOUIS ARPIN,  
*Montreal.*



SESSIONAL PAPER No. 21

STATEMENT of Steam Vessels lost, broken up or laid up, as unfit for service, in the Dominion during the Year ending June 30, 1900, and where and how employed.—*Continued.*

QUEBEC DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Georgiana.....	In sorel used as a Montreal and Harbour, tug.....	53·54	Screw tug, decayed would have cost more than she was worth to repair.
Levis.....	Used as a ferry steamer between Quebec and St. Romuald.....	156·55	Screw ferry, unfit for service decayed.
Francis.....	Used as a ferry steamer between Crosspoint and Campbelton, N.B.....	19·28	Paddle ferry, unfit for service decayed.
Temiscouata.....	Employed in Quebec as a Harbour tug.....	10·41	Decayed, not worth repairing.
Daisy.....	Employed on Lake Edward towing logs.....	4·31	Burnt down while at her wharf, on Lake Edward last fall.
Coukoo.....	In Chicoutimi employed as a tug.	6·03	Decayed not worth repairing.
		250·12	

PIERRE D. BRUNELLE,  
*Hull Inspector.*

JOS. SAMSON,  
*Boiler and Machinery Inspector.*

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*

NOVA SCOTIA DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Mary Jane. ....	Freight and fishing, coastwise.	25 86	Sold to foreigners.
Nereus . ....	Yacht, coastwise..	16·39	" "
Rimouski . ....	Passenger, coastwise ...	124·70	Wrecked near Lunenburg, N.S.
Delta.....	Freight and passenger, foreign.	873·21	" " Newfoundland.
Evangeline. ....	" " coastwise .	78·74	Sold to foreigners.
Arrow . ....	Yacht, Halifax Harbour.....	10·02	Broken up, machinery in Oneita.
		1,128·92	

JOHN P. ESDAILE,  
*Steamboat Inspector, Halifax, N.S.*



64 VICTORIA, A. 1901

STATEMENT of Steam Vessels lost, broken up or laid up, as unfit for service, in the Dominion during the Year ending June 30, 1900, and where and how employed.—*Continued.*

NEW BRUNSWICK AND PRINCE EDWARD ISLAND DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Nil . . . . .	. . . . .	. . . . .	. . . . .

W. L. WARING,  
*Steamboat Inspector.*

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*  
BRITISH COLUMBIA DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Spratts Ark . . . . .	Freight, coast, B.C. . . . .	. . . . .	Twin screw, unfit for service.
Kaslo . . . . .	Kootenay Lake, tug. . . . .	. . . . .	Screw, burnt.
Trail. . . . .	Columbia River. . . . .	. . . . .	Stern wheel, burnt.
Glad Tidings. . . . .	Missionary yacht. . . . .	. . . . .	Boiler requires extensive repairs.
Nell. . . . .	Freight, coast B.C. . . . .	. . . . .	" condemned.
Wm. Hunter. . . . .	Freight and pass., Slocan Lake. . . . .	. . . . .	" requires extensive repairs.
Rainbow. . . . .	" " coast B.C. . . . .	. . . . .	Dismantled.
Nahleen. . . . .	Freight and pass. . . . .	. . . . .	Fitting out, burnt.

J. A. THOMSON,  
*Steamboat Inspector, Victoria, B.C.*

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Continued.*  
BRITISH COLUMBIA AND YUKON DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Domville . . . . .	Yukon river, freight and pass. . . . .	485·96	Stern wheel, sunk.
W. Irving . . . . .	" " . . . . .	101·90	" " ice pack.
Reindeer. . . . .	" " . . . . .	. . . . .	" " burnt.
W. J. Stratton. . . . .	" " . . . . .	100·20	" " ice pack.
Florence S. . . . .	" " . . . . .	100·20	" " sunk,
Linderman. . . . .	" " . . . . .	54·	" " "
Alert . . . . .	Lake Bennett, tug . . . . .	7·	Screw, sunk.
Bonanza . . . . .	British Columbia waters, freight . . . . .	109·04	" broken up.
		958·30	

F. M. RICHARDSON, R.N.R.,  
*Steamboat Inspector, Vancouver.*



SESSIONAL PAPER No. 21

STATEMENT of Steam Vessels lost, broken up or laid up, &c.—*Concluded.*  
KEEWATIN, MANITOBA AND NORTH-WEST TERRITORIES DIVISION.

Name of Vessel.	Where and How Last Employed.	Gross Tonnage.	Class of Vessel and Reason of Unfitness.
Regina. ....	Lake of the Woods, passenger .	6.78	Screw, hull condemned.

GEO. P. PHILLIPS,  
*Steamboat Inspector.*

LIST of Certificates of Competency and Temporary Certificates granted to Engineers of Steamboats during the year ended June 30, 1900.

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1899.					\$ cts.
2504	July, 5..	Albert Michaud.....	4th Class.....	Village Bienville, Que...	Quebec...	5 00
2505	" 5..	Chas. Eryon .....	Temporary....	Georgeville, Que .....	Owls Head....	2 00
2506	" 5..	John A. Comber .....	" .....	" .....	Georgeville, Q.	2 00
2507	" 5..	C. H. LeBaron.....	" .....	North Hatley.....	Nth.Hatley,Q.	2 00
2508	" 7..	John W. McMillan.....	" .....	Niagara, Ont.....	Niagara on Lak	2 00
2509	" 7..	Eleazar Nickerson.....	" .....	Barrington Passage,N.S.	Halifax, N.S..	2 00
2510	" 10..	Cléophas Dubois.....	4th Class.....	Sorel, Que .....	Montreal, Q...	5 00
2511	" 10..	Daniel A. Morrison. .	Temporary....	Port Hawkesbury, N.S..	Mulgrave N.S.	2 00
2512	" 10..	Daniel O'Donnell.....	" .....	Belleville, Ont.....	Belleville, O..	2 00
2513	" 10..	John E. Ball... ..	" .....	Caesarae, Ont.....	Lindsay, O...	2 00
2514	" 10..	John Gonyea.....	" .....	Smiths Falls, Ont. . .	Kingston, O..	2 00
2515	" 10..	Robert Waterspoon.....	" .....	Cornwall, Ont .....	Cornwall, O...	2 00
2516	" 11..	Joseph H. Daball .....	3rd Class.....	Parry Sound, Ont.....	Parry Sound..	5 00
2517	" 11..	Wm. Parker Collings.....	4th " .....	Halifax, N.S.....	Halifax, N.S..	5 00
2518	" 18..	Andrew W. Lokerbie.....	Temporary....	Rat Portage, Ont.....	Rat Portage..	2 00
2519	" 21..	Alex. Coutts.....	" .....	" .....	" .....	2 00
2520	" 21..	Hercule St. Louis .....	" .....	Montreal, Que.....	Montreal, Q...	2 00
2521	" 22..	Joseph Lepage.....	3rd Class.....	Village Bienville, Que...	Quebec.....	5 00
2522	" 22..	Adolphe Côté... ..	3rd " .....	Sorel, Que.....	" .....	5 00
2523	" 26..	Wm. Thomas Windsor....	Temporary....	Callender, Ont.....	Callender, O..	2 00
2524	" 26..	Martin Graber.. ..	" .....	Pembroke, Ont.....	Pembroke, O..	2 00
2525	" 27..	Joseph Coventry.....	3rd Class.....	Callendar, Ont.....	Callender, O..	5 00
2526	" 27..	George Francis Martin ...	4th " .....	Merrickville, Ont.....	Montreal, Q...	5 00
2527	Aug. 1..	Peter Bow.....	Temporary....	Lake Megantic, Que.....	Lake Megantic	2 00
2528	" 1..	Joseph Fitzgerald.....	" .....	Quebec.....	Quebec. ....	2 00
2529	" 1..	David H. Judd.....	" .....	Lake Megantic, Que.....	Lake Megantic	2 00
2530	" 14..	Maxime Lapierre.....	" .....	Amherstburg, Ont .....	Amherstburg..	2 00
2531	" 14..	Wm. Franklin Cook.....	" .....	New Denver, B.C.....	New Denver .	2 00
2532	" 14..	C. Charles Kurtz.....	" .....	Kaslo, B.C .....	Nelson, B.C...	2 00
2533	" 14..	Daniel Kane.....	" .....	" .....	" .....	2 00
2534	" 14..	Geo. Henry Mitchell .....	" .....	" .....	Kaslo, B.C....	2 00
2535	" 14..	Geo. Henry Whitney.....	" .....	Kingston, Ont.....	Kingston, O..	2 00
2536	" 18..	Wm. Hungerford.....	" .....	Lindsay .....	Lindsay, O....	2 00
2537	" 18..	John Davis .....	" .....	Kingston .....	Kingston, O..	2 00
2538	" 18..	Henry Good .....	" .....	Napanee, Ont.....	" .....	2 00
2539	" 18..	Walter A. Stewart.. ..	" .....	Carleton Place, Ont.....	" .....	2 00
2540	" 18..	Martin L. Crandall.....	" .....	Port Perry, Ont.....	" .....	2 00
2541	" 18..	Mitchell Kinville.....	" .....	Brockville, Ont.....	" .....	2 00
2542	" 22..	Frank Fitzgerald.....	" .....	Quebec.....	Quebec, Q....	2 00
2543	" 22..	Ovide Bonin .....	" .....	Sorel, Que .....	" .....	2 00



64 VICTORIA, A. 1901

LIST of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was Passed.	Fee.
	1899.					\$ cts.
2544	Aug. 23..	Louis Lacombe.....	4th Class.....	Sorel, Que .....	Sorel, Q.....	5 00
2545	" 23..	F. X. Banffort. ....	4th " .....	St. Valier, Que....	Quebec, Q.....	5 00
2546	" 24..	Joseph Gouin .....	4th " .....	Sorel, Que .....	" .....	5 00
2547	" 24..	Emile Laliberté.....	4th " .....	Montreal, Que....	Montreal, Q.	5 00
2548	" 24..	Elzear Beaudoin.....	3rd " .....	Village Lauzon, Que..	Quebec, Q.....	5 00
2549	" 25..	Geo. F. Beaumont.....	Temporary....	Bracebridge, Ont .....	PortCarling O.	2 00
2550	Sept. 19..	Henry C. Cummins.....	4th Class.....	Balfour, B.C.....	Nelson, B.C...	5 00
2551	" 19..	Joseph Gervin. ....	Temporary....	Billings Bridge, Ont....	Ottawa, O.....	2 00
2552	" 19..	Edmond Gervais .....	4th Class.....	Sorel, Que .....	Montreal, Q...	
2553	" 21..	John Donovan.....	Temporary....	Rat Portage, Ont.....	RatPortage,O.	2 00
2554	" 22..	John Scott. ....	" .....	Pictou, N.S. ....	Halifax, N.S...	2 00
2555	" 22..	Frank Krafive.....	" .....	Cape Sable Island, N.S..	Barrington NS	2 00
2556	" 23..	Joseph L. Phillips.....	" .....	Mira Gut, C.B.....	Louisburg, CB.	2 00
2557	" 25..	Jonathan Hymers.....	" .....	Parry Sound, Ont.....	Parry Sound, O	2 00
2558	Sept. 29..	George Moreau.....	Temporary ...	Waubauskene, Ont .....	Waub'skene, O	2 00
2559	Oct. 2..	Herbert Johnson.....	" .....	Rat Portage, Ont .....	Rat Portage,O	2 00
2560	" 3..	John Hy. Gray. ....	2nd U. K.....	Victoria, B.C.....	Victoria, B.C.	*
2561	" 3..	Wm. Henry Salter.....	1st U. K. ....	Hoboken, N.J., U.S....	Halifax, N.S..	5 00
2562	" 3..	James T. Eldridge .....	Temporary ...	Rat Portage, Ont .....	Rat Portage,O	2 00
2563	" 3..	James T. Eldridge.....	4th Class .....	" .....	" .....	*
2564	" 3..	Lemuel Winchester.....	4th " .....	Charlottetown, P.E.I....	St. John, N.B.	*
2565	" 3..	Frank, Payne.....	4th " .....	" .....	" .....	5 00
2566	" 3..	Henry McElroy.....	3rd " .....	Kaslo, B.C.....	Nelson, B.C ..	5 00
2567	" 4..	Cleophas Girard.....	4th " .....	Sorel, P.Q. ....	Sorel, P.Q....	5 00
2568	" 4..	George Stewart.....	4th " .....	Victoria, B.C.....	Victoria, B.C.	5 00
2569	" 4..	John R. Young .....	3rd " .....	Nelson, B.C.....	" .....	5 00
2570	" 11..	Frank C. Ward .....	4th " .....	Halifax, N.S .....	Quebec, P.Q..	5 00
2571	" 14..	P. Laparière.....	4th " .....	Village Bienville, P.Q...	" .....	5 00
2572	" 14..	Joseph Cantin .....	4th " .....	" .....	" .....	5 00
2573	" 14..	Andre Donaldson.....	Temporary ...	Paribonka, Que.....	Roberval, Que.	2 00
2574	" 14..	Cleophas Barras .....	2nd Class.....	Village Lauzon, Que....	Quebec, Que...	5 00
2575	" 23..	John J. McLaren.....	4th " .....	Montreal, Que.....	Montreal, Que.	2 00
2576	Nov. 14..	Walter F. Boyden.....	Temporary....	Michipicoten Hbr, Ont..	Michipic. H., O	2 00
2577	" 18..	John Kelly .....	3rd Class .....	Vancouver, B.C.....	Vanc'ver, B.C.	5 00
2578	" 18..	James Cobain.....	4th " .....	Victoria, B.C.....	Victoria, B.C.	5 00
2579	" 18..	John A. Heritage.....	1st U. K. ....	" .....	" .....	5 00
2580	" 18..	Exavier Fournier.....	3rd Class .....	Quyon, Que.....	Montreal, P.Q.	5 00
2581	" 18..	Hugh M. Steward.....	1st U. K. ....	Quebec, P.Q.....	Quebec, P.Q..	5 00
2582	" 24..	John E. Angus.....	Temporary ...	Gore Bay, Ont.....	Gore Bay. Ont	2 00
2583	" 24..	Joseph, Nadon.....	3rd Class .....	Mente Bello, P.Q.....	Montreal, P.Q	5 00
2584	" 24..	Wm. Powles .....	Temporary ...	Tyendinaga, Ont.....	Kingston, Ont	2 00
2585	Dec. 6..	Jas. Edward Langley....	3rd Class .....	Victoria, B.C.....	Victoria, B.C.	5 00
2586	" 6..	Chas. Henry Waller.....	4th " .....	" .....	" .....	5 00
2587	" 7..	James Bertram Job .....	4th " .....	Toronto, Ont .....	Toronto, Ont..	5 00
2588	" 18..	Henry F. McKay .....	2nd U. K. ....	New Glasgow, N.S.....	Halifax, N.S..	5 00
2589	" 18..	Robert J. Parsell.....	2nd Class.....	Toronto, Ont .....	Toronto, Ont..	5 00
2590	" 18..	George Edwards.....	Temporary ...	Annapolis, N.S.....	Halifax, N.S..	2 00
2591	" 28..	Robert Thomas Beeles ..	4th Class .....	Toronto, Ont .....	Toronto, Ont .	5 00
2592	" 28..	Thos. Joseph Noonan.....	4th " .....	Hamilton, Ont.....	" .....	5 00
2593	" 28..	John Morse Morris.....	4th " .....	Toronto, Ont.....	" .....	5 00
	1900.					
2594	Jan. 5..	Thomas Service .....	2nd U. K. ....	Halifax, N.S.....	Halifax, N.S..	5 00
2595	" 9..	Edwd. J. Turbett.....	4th Class .....	Kingston, Ont.....	Kingston, Ont.	*
2596	" 9..	Win. Tracy .....	Temporary ...	Barrie, Ont.....	Toronto, Ont .	2 00
2597	" 12..	Bert. James Mitchell.....	4th Class .....	Toronto, Ont .....	" .....	5 00
2598	" 12..	Geo. Ambroise Sauve.....	4th " .....	Garden Island, Ont....	Kingston, Ont	5 00
2599	" 12..	Simon Jas. Young.....	4th " .....	Hanover, Ont. ....	Toronto, Ont .	5 00
2600	" 12..	Thomas K. Abra.....	4th " .....	Vancouver, B.C .....	Victoria, B.C.	5 00
2601	" 12..	John E. Angus.....	Temporary ...	Gore Bay, Ont .....	Gore Bay, Ont	2 00
2602	" 18..	John Leonard.....	" .....	St. John, N.B .....	St. John, N.B.	2 00

\* Exchanged certificate.

† Second examination.



## SESSIONAL PAPER No. 21

List of Certificates of Competency granted to Engineers of Steamboats. &c.—*Con.*

Number of Certificate.	Date of Certificate	Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1900					\$ cts.
2603	Feb. 22..	Wm. D. Chrysler.....	4th Class .....	Owen Sound, Ont.....	Toronto, Ont..	5 00
2604	" 22..	Frank Goodwin .....	4th " .....	Baxter, Ont .....	" .....	5 00
2605	" 22..	John McH. Donaldson ..	2nd " .....	Toronto, Ont .....	" .....	5 00
2606	" 22..	John Wilkie Taylor .....	2nd " .....	Collingwood, Ont.....	" .....	5 00
2607	" 22..	William Harman.....	3rd " .....	" .....	" .....	5 00
2608	" 22..	George Caister.....	3rd " .....	Dresden, Ont.....	" .....	5 00
2609	" 22..	Jos. Alex. Kerby.....	3rd " .....	" .....	" .....	5 00
2610	" 23..	Geo. Henry Eisner.....	2nd U. K.....	Halifax, N.S.....	Halifax, N.S..	5 00
2611	" 23..	Dougald Campbell.....	3rd Class .....	Louisburg, C.B. ....	" .....	5 00
2612	" 23..	David Leslie.....	3rd " .....	Kingston, Ont.....	Kingston, Ont.	5 00
2613	" 23..	Thomas Naas.....	Temporary .....	Lunenburg, N.S.....	Halifax, N.S..	2 00
2614	July 23..	Stephens H. Gucker.....	3rd Class .....	Lindsay, Ont.....	Kingston, Ont.	5 00
2615	" 26..	August Pendola.....	2nd " U K.....	Vancouver, B.C .....	Victoria, B.C.	5 00
2616	" 26..	Alphonse Hamelin.....	3rd " .....	Montreal, Que.....	Montreal, Que.	5 00
2617	" 26..	William Roe.....	4th " .....	Victoria, B.C.....	Victoria, B.C.	5 00
2618	" 26..	Geo. Royal McBain.....	4th " .....	Vancouver, B.C.....	" .....	5 00
2619	" 26..	James Hannan.....	1st " U.K.....	Paisley, England.....	St. John, N.B.	5 00
2620	Mar. 2..	Henry Howe.....	3rd " .....	St. John, N.B.....	Halifax, N.S..	5 00
2621	" 3..	Edward Seymour Meehan.	2nd " U.K.....	Halifax, N.S.....	" .....	5 00
2622	" 3..	John Alfred O'Brien.....	2nd " U.K.....	" .....	" .....	5 00
2623	" 3..	William Ford.....	4th " .....	" .....	" .....	5 00
2624	" 5..	John Scott .....	Temporary.....	Pictou, N.S.....	" .....	2 00
2625	" 6..	Achille Carrier.....	4th Class .....	Village Lauzon, Que...	Quebec, P.Q..	5 00
2626	" 6..	Alexander Zwicker .....	4th " .....	Bridgewater, N.S.....	Halifax, N.S..	5 00
2627	" 6..	Richard John McGuire...	4th " .....	Elgin, Ont.....	Kingston, Ont.	5 00
2628	" 6..	Peter William Lyon.....	2nd " .....	Barrie, Ont .....	Toronto, Ont..	5 00
2629	" 6..	Chas. Achers Shephard...	2nd " .....	Georgeville, Que.....	Montreal, Que.	5 00
2630	" 6..	Peter Donaldson.....	4th " .....	Owen Sound, Ont. ....	Toronto, Ont..	5 00
2631	" 6..	Frank Krafoe.....	Temporary .....	Barrington, N.S.....	Halifax, N.S..	2 00
2632	" 6..	Joseph Lapointe .....	4th Class .....	Village Lauzon, Que...	Quebec, P.Q..	5 00
2633	" 7..	Alcime Beaudet.....	4th " .....	St. Jean Deschaillon, Que	" .....	5 00
2634	" 7..	Willie A. Lebeau.....	4th " .....	Sorel, Quebec, Que .....	Sorel, P.Q....	5 00
2635	" 7..	Danl. D. Kane. ....	Temporary .....	Kaslo, B.C.....	Victoria, B.C.	2 00
2636	" 27..	John McGraw.....	1st Class U.K.....	Victoria, B.C.....	" .....	5 00
2637	" 37..	James Wallace.....	1st " .....	" .....	" .....	5 00
2638	" 27..	James Evans.....	4th " .....	Kingston, Ont.....	Kingston, Ont.	5 00
2639	" 27..	George Lucas.....	4th " .....	Victoria, B.C.....	Victoria, B.C.	5 00
2640	" 27..	Edward Wm. Maloney...	4th " .....	Deseronto, Ont. ....	Kingston, Ont.	5 00
2641	" 27..	Charles Napper .....	3rd " .....	Kingston, Ont.....	" .....	5 00
2642	" 27..	Henry T. Flett.....	3rd " .....	Victoria, B.C.....	Victoria, B.C.	5 00
2643	" 27..	John Hyslop Alexander...	3rd " .....	" .....	" .....	5 00
2644	" 27..	Clarence Arthur.....	3rd " .....	Vancouver, B.C.....	Vancouver....	5 00
2645	" 27..	Robert Ryder.....	3rd " .....	" .....	" .....	5 00
2646	" 27..	James Gallivan.....	3rd " .....	Kingston, Ont .....	Kingston, Ont.	5 00
2647	" 29..	Fred'k. Marie Young.....	Temporary .....	Young's Point, Ont. ....	" .....	2 00
2648	" 29..	John James Coones .....	" .....	Bridgenorth, Ont. ....	" .....	2 00
2649	" 29..	Andrew Lajeunesse.....	" .....	Peterboro, Ont.....	Peterboro, Ont	2 00
2650	" 30..	Thos. Wilbert Whiteley..	" .....	Sombra, Ont.....	Sombra, Ont..	2 00
2651	" 30..	Scott W. Clark.....	" .....	Little Current, Ont .....	Little Current.	2 00
2652	April 12..	Alexander Zwicker.....	" .....	Bridgewater .....	Halifax, N.S..	2 00
2653	" 10..	Wm. James McIntyre.....	" .....	Port Sydney, N.S.....	Toronto, Ont..	2 00
2654	May 31..	Hedley Vicar Pye.....	" .....	Hopewell Cape, N.B....	St. John, N.B.	2 00
2655	" 31..	Walter F. Boydon.....	" .....	Michipicoten Hbr., O...	Michipicoten..	2 00
2656	" 31..	William A. Dawson.....	" .....	Napanee, Ont.....	Kingston, Ont.	2 00
2657	" 31..	James Logan.....	" .....	Peterboro, Ont .....	" .....	2 00
2658	" 31..	George Henry Whitney...	" .....	Brockville, Ont.....	" .....	2 00
2659	" 31..	Emery Scott.....	" .....	Rat Portage, Ont. ....	Rat Portage, O	2 00
2660	" 31..	Alfred McCall.....	" .....	" .....	" .....	2 00
2661	" 31..	Alfred Edward Booker...	" .....	" .....	" .....	2 00
2662	" 31..	Rosario Derry.....	" .....	" .....	" .....	2 00
2663	" 31..	John Martin Donovan....	" .....	" .....	" .....	2 00
2664	" 31..	Gabriel Bellefeuille...	" .....	" .....	" .....	2 00
2665	" 31..	Willis F. Cook.....	" .....	New Denver, B.C.....	Victoria, B.C.	2 00
2666	" 31..	Christian C. Kurtz.....	" .....	Nelson, B.C.....	" .....	2 00



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List of Certificates of Competency granted to Engineers of Steamboats, &c.—*Con.*

Number of Certificate.	Date of Certificate		Name.	Grade.	Address.	Where Examination was passed.	Fee.
	1900.						\$ cts.
2667	May	31..	Danl. A. Morrison.....	Temporary ...	Port Hawkesbury, N.S..	Halifax, N.S..	2 00
2668	"	31..	George Thos. Leach. ....	" .....	Montreal, Que.....	Montreal, Que.	2 00
2669	"	31..	Frederick W. Richardson.	" .....	Lord's Cove, N.B....	St. John, N.B.	2 00
2670	"	31..	Edgar P. Strang. ....	" .....	Charlottetown P.E.I....	" .....	2 00
2671	June	1..	Irene Rivard.....	" .....	Grandes Piles, Que.....	Gra. Piles, Q..	2 00
2672	"	1..	George Rivard.....	" .....	" .....	" .....	2 00
2673	"	1..	William Campbell.....	" .....	Pictou, N.S.....	Pictou, N.S...	2 00
2674	"	1..	Arthur McCann.....	" .....	Wallace, N.S.....	Halifax, N.S..	2 00
2675	"	1..	Alexander Duprey.....	" .....	Pictou, N.S. ....	Pictou, N.S...	2 00
2676	"	1..	Edward Cowan.....	" .....	Halifax, N.S.....	Halifax, N.S..	2 00
2677	"	1..	John Hy. Kennedy.....	" .....	Wine Harbour, N.S....	" .....	2 00
2678	"	2..	Malcolm McP. Kirk.....	3rd Class.....	Kingston, Ont.....	Kingston, Ont	5 00
2679	"	2..	Harry A. Armstrong.....	3rd " .....	Morrisburg, Ont.....	" .....	5 00
2680	"	2..	Reese Binch.....	3rd " .....	Toronto, Ont .....	Toronto, Ont..	5 00
2681	"	2..	Thos. Henry McMurray..	3rd " .....	Collingwood, Ont.....	" .....	5 00
2682	"	2..	Joseph Henry Louden...	3rd " .....	Toronto, Ont. ....	" .....	5 00
2683	"	4..	Morgan Ernest Jones.....	3rd " .....	Ottawa, Ont.....	Montreal, Que.	5 00
2684	"	4..	Joseph Poitras, jr.....	3rd " .....	Thurso, Que. ....	" .....	5 00
2685	"	4..	Alphonse Samson .....	3rd " .....	Village Bienville, Que..	Quebec, Que..	5 00
2686	"	4..	George Lemelin.....	3rd " .....	Village Lauzon, Que....	" .....	5 00
2687	"	4..	Lewis Smith. ....	3rd " .....	Halifax, N.S.....	Halifax, N.S..	5 00
2688	"	4..	Chas. McSorley.....	2nd " .....	Kingston, Ont.....	Kingston, Ont.	5 00
2689	"	4..	George Sylvester.....	2nd " .....	Collingwood, Ont.....	Toronto, Ont..	5 00
2690	"	4..	Wm. Edwd. Sutherland...	1st U. K.....	Louisburg, N.S.....	Halifax, N.S..	5 00
2691	"	4..	Alfred Larocque.....	4th Class.....	Killarney, Ont .....	Toronto, Ont..	5 00
2692	"	4..	Thos. Cauldwell McArn..	4th " .....	Toronto, Ont.....	" .....	5 00
2693	"	4..	Geo. Smith Muir.....	4th " .....	Victoria, B.C.....	Vanco'ver, B.C	5 00
2694	"	4..	David McKechnie.....	4th " .....	Winnipeg, Man.....	Winnipeg, M..	5 00
2695	"	4..	George Birmie .....	4th " .....	Holland, Man .....	RatPortage, O.	5 00
2696	"	4..	Théophile Côté.....	Temporary ...	Grandes Piles, Que.....	Gra. Piles, Q..	2 00
2697	"	4..	Joseph Fournier.....	" .....	Lake Edward, Que.....	L. Edward, Q.	2 00
2698	"	4..	Joseph Michael Carr .....	3rd Class.....	Port Dalhousie, Ont....	Toronto, Ont..	5 00
2699	"	4..	Lorne McMillan.....	4th " .....	Owen Sound, Ont.....	Owen Sound, O	5 00
2700	"	4..	Geo. K. Richardson.....	4th " .....	Toronto, Ont .....	Toronto, Ont..	5 00
2701	"	4..	James Gregg. ....	3rd " .....	Owen Sound, Ont.....	Owen Sound, O	5 00
2702	"	4..	Wm. John Woolner.....	4th " .....	Collingwood, Ont.....	Collingwood, O	5 00
2703	"	4..	Vincent Robinson .....	4th " .....	Toronto, Ont .....	Toronto, Ont..	5 00
2704	"	7..	Clifton Kingsley .....	Temporary ...	Rat Portage, Ont.. ....	RatPortage, O.	2 00
2705	"	7..	Jonathan Hymers.....	" .....	Parry Sound, Ont.....	ParrySound, O	2 00
2706	"	9..	Henry Stanley Dewar....	4th Class.....	Selkirk, Man.....	Selkirk, Man.	5 00
2707	"	9..	T. Ferguson McKechnie..	2nd U. K.....	Nelson, B.C .....	Victoria, B.C.	5 00
2708	"	9..	Henry William Clark.....	2nd Class.....	St. John, N.B.....	St. John, N.B.	*
2709	"	9..	Daniel O. Dennell.....	Temporary ...	Belleville, Ont.....	Belleville, O..	2 00
2710	"	9..	John Franklin Robbin....	" .....	" .....	" .....	2 00
2711	"	11..	Wm. F. Brown.....	" .....	Winnipeg, Man.....	Winnipeg, M..	2 00
2712	"	11..	Francis Vignaux.....	" .....	Oxbow Farm, Que .....	N.D.Garde, Q.	2 00
2713	"	11..	John Paul .....	" .....	Newboro, Ont.....	Kingston, O..	2 00
2714	"	11..	Augusta Fortin .....	" .....	Rat Portage, Ont.....	RatPortage, O.	2 00
2715	"	11..	Geo. Cranston Brownlee..	2nd U. K.....	Victoria, B.C. ....	Victoria, B.C.	5 00
2716	"	11..	James Hopkins.....	Temporary ...	Toronto, Ont.....	Toronto, Ont..	2 00
2717	"	11..	Hermidas Houle.....	4th Class.....	Sorel, Que.....	Sorel, Que....	5 00
2718	"	13..	George Moreau.....	Temporary ...	Waubushene, Ont.....	Waub'shene, O	2 00
2719	"	13..	Cléophas Girard .....	" .....	Sorel, Que ...	Montreal, Que.	2 00
2720	"	13..	Herbert Johnson.....	" .....	Rat Portage, Ont.....	RatPortage, O.	2 00
2721	"	20..	George Miles.....	" .....	Bobcaygeon, Ont. ....	Kingston, Ont.	2 00
2722	"	20..	John Edward Ball.....	" .....	Caesarea, Ont.....	Lindsay, Ont.	2 00

\* Second examination.



SESSIONAL PAPER No. 21

## APPENDIX No. 12.

STATEMENT giving Names and Stations of Light-Keepers, &amp;c., in the Dominion.

## ABOVE MONTREAL.

Name.	Station.	Appointed.	Salary.
Acton, Jas. A.....	Burnt Island.....	April 12, 1890.....	250 00
Armstrong, John.....	Kaministiquia River.....	" 28, 1894.....	200 00
Alexander, Andrew.....	Lamb Island.....	May 1, 1897.....	400 00
Aitken, Jas. H.....	Stonehouse.....	July 25, 1900.....	250 00
Baker, Henry F.....	Clapperton Island.....	December 2, 1895.....	350 00
Boyd, Robert P.....	Cole Shoal.....	April 9, 1884.....	250 00
Boyd, Wm. S.....	Griffith Island.....	May 14, 1889.....	350 00
Burlingham, James.....	Point Peter Light and Fog Alarm.....	" 1, 1876.....	†650 00
Butler, Silas L.....	Port Dover.....	July 15, 1897.....	300 00
Baxter, Wm. I.....	Gin Rock.....	November 23, 1885.....	300 00
Borron, Edward.....	French River.....	September 13, 1875.....	500 00
Beaulieu, Octave.....	Point à Cadieux.....	July 26, 1892.....	150 00
Boucher, François.....	Aylmer Island.....	November 17, 1882.....	175 00
Bamford, Robert.....	Wilson's Channel, Algoma.....	June 21, 1888.....	250 00
Bertrand, Felix.....	Lower End Coulonge Lake.....	March 16, 1885.....	100 00
Boyd, Wm. M.....	Kagawong.....	April 13, 1893.....	72 00
Boyer, Napoléon.....	Lake St. Louis Light-ship No. 3.....	" 13, 1898.....	300 00
Boyter, A. B.....	Narrow, Island.....	January 3, 1898.....	200 00
Brown, Adam.....	Red Rock, Parry Sound.....	May 25, 1899.....	450 00
Ball, J. H.....	Manitoulin Island Light and Fog Alarm.....	" 7, 1900.....	600 00
Belanger, Adrian.....	Light-ship No. 1, Lake St. Louis.....	July 27, 1900.....	250 00
Campbell, Thos.....	Burlington Beach.....	April 1, 1875.....	350 00
Collins, Allen.....	Christian Island.....	March 25, 1891.....	*425 00
Cross, Manly R.....	Gananoque Narrows and Jack Straw Shoal.....	August 25, 1896.....	480 00
Campbell, Robert.....	Goderich.....	June 9, 1886.....	400 00
Currie, Geo.....	Isle of Coves.....	April 1, 1878.....	†650 00
Craig, Wm.....	Thunder Cape.....	May 17, 1892.....	600 00
Cook, Seldon B.....	Long Point Light and Fog Alarm.....	June 9, 1897.....	700 00
Campbell, John.....	McTavish Point.....	November 18, 1896.....	100 00
Clark, Arthur Geo.....	Nottawasaga Island.....	July 5, 1890.....	500 00
Crevier, Dolphis.....	Point Claire.....	May 11, 1888.....	200 00
Cartier, H. J.....	River Thames.....	October 19, 1884.....	425 00
Cooper, John.....	Prince Arthur's Landing.....	" 14, 1882.....	300 00
Cosgrove, George.....	Victoria Island, Lake Superior.....	November 14, 1889.....	350 00
Columbus, Christopher.....	Penetanguishene and Whisky Island.....	March 18, 1893.....	300 00
Conover, Forrest H. C.....	Leamington.....	April 24, 1883.....	150 00
Covert, John.....	Belleville.....	June 1, 1881.....	200 00
Cox, John.....	Morrison's or Hawley's Island.....	" 22, 1887.....	100 00
Chabot, Joseph.....	Papineauville Range Lights.....	" 17, 1897.....	100 00
Connors, Frank.....	Point Pleasant.....	October 13, 1898.....	200 00
Chase, H. J.....	Weller's Bay.....	November 4, 1898.....	150 00
Davieux, Joseph.....	Corbay Point, Batchewana.....	May 27, 1890.....	350 00
Durnan, George.....	Gibraltar Point.....	" 31, 1854.....	625 00
Daoust, Daniel.....	Lake St. Louis Light-ship No. 2.....	October 20, 1897.....	300 00
Dickinson, Wm. E.....	Long Point, West End.....	September 30, 1879.....	*400 00
Davieau, Hyacinth.....	Michipicoten Island.....	July 1, 1881.....	400 00
Daoust, Dosithée.....	McKie's Point.....	September 22, 1893.....	175 00
Davis, John H.....	Pidgeon Island.....	May 16, 1896.....	350 00
Dick, Andrew.....	Point Porphyry.....	August 10, 1880.....	400 00
Dutcher, Samuel.....	Meaford.....	May 7, 1877.....	150 00
Davis Henry B.....	Tobermory.....	November 23, 1895.....	130 00
Darling, Thomas.....	Nipissing, South-east Bay Beacon Light.....	July 1, 1890.....	60 00
Dixon, Joseph G.....	Lake Rosseau.....	" 21, 1890.....	100 00

\* Allowance \$10.    † Allowance \$100.    ‡ Appointed engineer fog alarm March 26, 1891.



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STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Dempsey, J. Frank.....	Potter's Island Pole Light.....	June 14, 1892.....	*10 00
Demers, Wilbrod.....	Caribou Island, Lake Superior.....	May 10, 1899.. . .	800 00
Ead, Mrs. C.....	Port Stanley.....	August, 1890.. . . .	300 00
Ely, Henry R. A.....	Wiarton Pole Light.....	September 14, 1891..	75 00
Felan, Maurice.....	Oakville Pier.....	April 28, 1894. . . .	150 00
Fortier, David H. A....	Port Colborne Range Lights and Fog Alarm	" 11, 1865.....	550 00
Fellowes, W. R.....	Rondeau Harbour.....	December 18, 1888 ..	300 00
Filiatreault, Thomas.....	Coteau Landing.....	May 27, 1890.....	140 00
Grignon, Xavier.....	Beauharnois.....	March 16, 1885.....	†200 00
Gloude, Benjamin.....	Pointe Clair.....	September 7, 1872...	300 00
Grubb, W. A.....	Point Pelee Reef Light and Fog Alarm....	October 21, 1893.....	700 00
Gillespie, Wm.....	Wolfe Island.....	March 16, 1885.....	250 00
Gauthier, Charles.....	St. Placide.....	May 1, 1874.....	140 00
Gordon, Robert.....	Cobourg Pier.....	" 16, 1883.....	180 00
Griffith, Alfred H.....	Giant's Tomb.....	September 17, 1898..	250 00
Gorley, John, jr.....	Manitowaning.....	July 3, 1900.....	150 00
Hackett, Andrew.....	Bois Blanc.....	January 13, 1864....	435 00
Hudgins, James M.....	False Ducks.....	April 28, 1894.....	350 00
Hamilton, John.....	Hamilton's Island.....	September 3, 1873...	130 00
Hill, Thomas H.....	Lancaster Pier.....	July 1, 1877.....	325 00
Haitez, Jean.....	Lonely Island.....	May 11, 1885.....	450 00
Hunter, David.....	Port Dalhousie... .	October 29, 1879.....	350 00
Hawkins, David B.....	Peninsula Harbour.....	August 31, 1891.....	400 00
Huff, Thomas W.....	Parry Sound Range Lights.....	July 25, 1894... . .	550 00
Harvey, James.....	Thessalon.....	November 22, 1897..	250 00
Hughes, Wm.....	Red River Range Lights.....	— 1885.....	250 00
Hughes, Amos.....	Point aux Pins.....	May 10, 1899.....	250 00
Hamilton, Thos.....	Pie Island, Port Arthur.....	April 15, 1899.....	75 00
Johnson, Isaac S.....	Cherry Island.....	November 5, 1883....	300 00
Jackson, Wm.....	Spectacle Shoal and Red Horse Rock.....	August 1, 1880.. . .	400 00
Jeffrey, Carson.....	Nigger Island Shoal.....	April 28, 1894 .. .	200 00
Kinney, James.....	Gore Bay.....	July 27, 1895.....	350 00
Kennedy, James.....	Allumette Island.....	May 23, 1887.....	100 00
Lambert, Wm. McGregor..	Chantry Island.....	October 1, 1880.....	500 00
Labelle, Louis.....	Deep River Island.....	May 5, 1897.....	100 00
Laberge, Alfred.....	Green Shoal.....	January 26, 1866....	‡240 00
Lamorandière, Pierre Ré- gis de.....	Killarney.....	September 24, 1880..	400 00
Léger, Thomas.....	Lachine Pier.....	July 14, 1897.....	250 00
Lamondin, Joseph.....	Byng Inlet.....	April 19, 1884.....	375 00
Lee, John.....	Southampton.....	October 7, 1882.....	150 00
Lockerbie, Andrew.....	Collingwood Harbour.....	May 4, 1883.....	300 00
Low, Robert.....	Thornbury.....	April 12, 1887.....	80 00
Lowry, Robert M.....	Port Elgin.....	March 14, 1896.....	80 00
Lumsden, A.....	Lake Temiscamingue Lights.....	October 6, 1890.....	200 00
Lidwill, John R.....	Pelee Island.....	July 10, 1899.....	300 00
Lawson, Colin P.....	Middle Island.....	October 17, 1898....	240 00
Muller, Michael.....	South River Muskoka.....	May 8, 1900.....	80 00
Munroe, John Jacob.....	Lancaster Bar.....	June 8, 1892 .. . .	280 00
Moreland, F.....	Nine Mile Point.....	April 1, 1895.....	200 00
Masson, Lucas H.....	Pointe aux Anglais.....	September 4, 1897 ..	200 00
Mongeon, Charles A.....	Way Shoal.....	May 23, 1887.....	100 00
Matheson, Norman.....	Cape Robert, Algoma.....	October 7, 1896.....	350 00
Millar, John.....	Port Credit.....	December 16, 1897...	150 00
Morriseau, Jonathan.....	Hooper's Point.....	March 24, 1898.....	150 00
Manson, John.....	Colchester Reef.....	June 9, 1886.. . .	600 00

\*Per month during season of navigation. †Allowance \$60. ‡Allowance \$10.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*ABOVE MONTREAL—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Morriseau, Michael.....	Rainy River, Algoma.....	June 9, 1886.....	*250 00
Martin, Wm. J.....	Spanish River.....	July 5, 1890.....	250 00
Malott, Albert E.....	Kingsville Range Lights.....	April 12, 1890.....	150 00
Miron, Louis.....	Gargantua.....	October 26, 1889.....	450 00
Maguire, James W.....	Corunna Range Lights.....	April 12, 1890.....	120 00
Murray, Wm.....	Valleyfield Range Lights.....	May, 17, 1900.....	150 00
Montgomery, Wm.....	Toronto Harbour, Eastern Channel.....	October 16, 1895.....	300 00
Matheson, Daniel ..	Black Bear Island, Manitoba.....	June 22, 1889.....	150 00
Magnusson, August.	Gull Harbour, Lake Winnipeg.....	September 19, 1898..	150 00
McKenzie, Donald.....	Little Current.....	" 1, 1898.....	350 00
McKillop, John.....	Campbell's Island.....	April 2, 1892.....	150 00
McIntosh, John.....	Arnprior Island .....	" 2, 1892.....	150 00
McKenzie, John.....	Owen Sound.....	July 14, 1873.....	100 00
McDonald, Murdoch.....	Point Clark.....	January 8, 1897.....	375 00
McDonald, Amos.....	Salmon Point.....	July 12, 1897.....	300 00
McKillop, Donald.....	St. Anicet Shoal.....	June 8, 1892.....	230 00
McLaren, Allan J.....	Brown's or Knapp's Point ..	February 11, 1896...	180 00
McKay, Chas S.....	Battle Island.....	August 27, 1877.....	500 00
McIntosh, Daniel ..	South Bay Point.....	October 1, 1881.....	200 00
McKenzie, Wm.....	Strawberry Island.....	May 17, 1893 .....	300 00
McQuestion, Mrs. Maria.	McQuestion Point.....	June 9, 1886.....	100 00
McAulay, Donald.....	Saugeen River.....	March 16, 1899.....	80 00
McDonald, Lauchlin D...	Mississagua Island.....	May 16, 1896.....	450 00
McCool, James.....	Fort William Beacon Light, Ottawa River.	" 23, 1887.....	90 00
McDevitt, Chas. ....	Point au Baril.....	March 1, 1897.....	300 00
McKay, John.....	L'yal Island.....	October 27, 1884.....	450 00
McLean, Arch .....	Owen Sound.....	December 23, 1897...	126 00
McGaw, Thos.....	Kincardine .....	June 13, 1899.....	350 00
Quillette, Godfrey.....	Buckam's Point.....	May 1, 1884 .....	180 00
O'Rourke, Michael.....	Centre Brother Island.....	June 18, 1894.....	200 00
O'Brien, Matthew ..	Frenchman's Bay.....	October 13, 1898.....	125 00
O'Conner, P.....	Bishop's Bay, Algoma ..	April 13, 1899.....	150 00
Plumb, Ward S .....	Wind Mill Point.....	November 18, 1882..	180 00
Purvis, John.....	Great Duck Island Light and Fog Alarm..	March 9, 1898.....	†500 00
Pettypiece, Stephen ..	Lime Kiln Crossing.....	May 11, 1888.....	350 00
Prosser, John .....	Muskoka or Fox Island.....	September 14, 1896..	250 00
Plunkett, H. E.....	Swampy Island, Lake Winnipeg.....	October 12, 1884.....	350 00
Proudfoot, Thos.....	Neebish, St. Mary's River.....	November 4, 1898...	100 00
Root, Albert.....	Grenadier Island.....	December 15, 1863...	250 00
Roddick, Robert.....	Gull Island .....	March, 1872 .....	500 00
Row, Geo. Albert.....	Telegraph Island.....	October 25, 1895.....	200 00
Repentigny, Toussaint de.	Ste. Anne de Bellevue ..	February 28, 1881...	‡125 00
Robillard, Honoré.....	Isle Perrot.....	January 25, 1897.....	100 00
Redmond, William H.....	Gravenhurst Narrows.....	June 18, 1894.....	100 00
Rains, Evan.....	Shoal Point, Algoma .....	November 24, 1884..	250 00
Rains, A. M.....	Sailor's Encampment.....	August, 1892 .....	‡‡17 00
Rains, W. W.....	Westfield Range Light.....	" 1892.....	‡‡ 7 00
Ritchie, James.....	South Bay Range Lights.....	" 20, 1898.....	150 99
Rowan, James.....	Victoria Island, Galetta.....	December 3, 1898...	100 00
Richardson, Wm.....	Michipicoten Hr. Algoma.....	September 28, 1900..	200 00
Sommers, Napoleon.....	Midland Range Lights.....	June 19, 1900.....	150 00
Shannon, William.....	Gross Point.....	September 27, 1866..	**425 00
Shannon, George.....	Assistant.....	" 27, 1866.....	175 00
Seguin, Grégoire.....	L'Orignal .....	May 8, 1894.....	100 00
Smithers, R. O.....	Mohawk Island.....	March 31, 1896.....	400 00
Sutherland, Jno.....	Port Burwell .....	June 18, 1894.....	225 00
Schofield, Fergus.....	Port Maitland .....	April 10, 1871.....	350 00
Simpson, Hedley V.....	Presqu'Isle.....	May 11, 1888.....	540 00
Smith, H. E.....	Presque Isle, Main Light.....	April 29, 1898.....	350 00

\* Allowance \$30. † Allowance \$200 attending Fog alarm. ‡ Allowance \$25. ‡‡ Per month while light in operation. \*\* Allowance \$10.



64 VICTORIA, A. 1901

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

ABOVE MONTREAL—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Shepperd, Mrs. Wm., act- ing keeper.....	Sulphur Island, Range Light.....	August, 1890.....	300 00
Sullivan, Silas.....	Baskin's Wharf.....	December 22, 1896...	130 00
Sauvé, Honoré.....	Caron's Point.....	February 16, 1889...	60 00
Spence, Bernard.....	Paquet Rapids.....	April 2, 1892.....	100 00
Stoneburner, John A.....	Cornwall Canal, upper entrance.....	" 12, 1890.....	100 00
Smith, Richard.....	Western Island.....	March 5, 1896.....	700 00
Smith, Donald.....	Flower Pot Island.....	November 8, 1897...	300 00
Spencer, D. O.....	Scotch Bonnet.....	August 8, 1898..	350 00
Taylor, Ross.....	Stag Island, River St. Clair.....	July 12, 1900.....	150 00
Veech, Stannes.....	Nine Mile Point ; light-keeper and engineer of fog alarm.....	March 7, 1894..	450 00
Valee, Charles.....	Hope Island.....	April 20, 1899.....	450 00
Wallace, John.....	Lindoe Island.....	July 1, 1881.....	250 00
Winthrop, Robert W.....	Head of Dechene Rapids.....	April 13, 1891.....	100 00
Weightman, Wm.....	North Sisters Rock, Algoma.....	November 6, 1885...	350 00
Wootton, Edward.....	Niagara.....	July 11, 1887.....	50 00
White, Charles L.....	Snug Harbour, Parry Sound.....	" 25, 1894.....	350 00
Webster, Chas.....	Cabot's Head Light and Fog Alarm. ....	May 10, 1898..	650 00
Whitmarsh, John.....	Snake Island.....	July 18, 1900.....	350 00

BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC.

Arcand, Elzéar.....	Cap de la Madeleine.....	May 17, 1892..	80 00
Ayer, R.....	Georgeville, Lake Memphremagog.....	From year to year...	*1 50
Arcand, Alfred..	Seven Islands.....	May 20, 1898.....	324 00
Ascah, James.....	Fame Point, Gaspé Co.....	September 2, 1880..	400 00
Beaudet, Fulgence.....	Lotbinière (1).....	June 1, 1895.....	80 00
Beaudet, George.....	Lotbinière (2).....	January 4, 1883.....	80 00
Beaudet, Charles.....	Platon.....	August 24, 1894..	†120 00
Bourque, Peter.....	Bird Rocks.....	November 27, 1896..	1,300 00
Bouilliane, Pierre.....	Lark Islet.....	September 1, 1872..	200 00
Bertrand, Auguste.....	Macquereau Point.....	December 21, 1877..	300 00
Banville, Joseph.....	Matane.....	February 1, 1897....	‡250 00
Bourget, F.....	Percé Roadstead.....	March 18, 1893.....	200 00
Babin, Louis D.....	Pillars.....	February 23, 1874..	450 00
Babin, Louis D.....	Algernon Rock.....	" 23, 1874.....	200 00
Breton, Narcisse.....	Point Rich.....	May 16, 1896.....	500 00
Bourget, Charles.....	Cape Despair.....	November 1, 1897...	\$400 00
Bisson, Wm.....	Grand River.....	October 22, 1896....	\$150 00
Bergeon, George.....	River Valee.....	June 16, 1885.....	70 00
Bouchard, Louis.....	Cap au Saumon Lighthouse and Fog Alarm.	May 16, 1896..	600 00
Beaulieu, Jos. Hudon dit..	Point aux Originaux.....	April 7, 1875.....	250 00
Boucher, Louis.....	Isle aux Raisins.....	" 13, 1898.....	240 00
Belanger, H.....	St. Thomas Wharf.....	" 4, 1898.....	80 00
Bujold, Louis.....	Carleton Point.....	May 25, 1899..	250 00
Carignan, L. P.....	Champlain Main Light.....	October 1, 1892...	80 00
Cormier, Wm.....	Amherst Island.....	April 26, 1871.....	**300 00
Coltin, Michael.....	Belleisle.....	" 1, 1882.....	††1,100 00
Côté, Louis T.....	Cape Chatte.....	September 10, 1874..	‡‡300 00
Campbell, John W.....	Cape Norman Lighthouse and Fog Alarm.	April 12, 1890.....	720 00
Costin, Eugène.....	Cape Rosier.....	November 4, 1890...	800 00
Cassidy, James.....	Entry Island.....	September 22, 1873..	***300 00
Côté, Paul.....	Egg Island.....	November 3, 1871...	500 00
Chamberlain, H.....	Oak Point, Range Lights.....	April 19, 1900.....	75 00

\* Per week. † Has also charge of Back Range Light at \$5 per month. ‡ Allowance \$100.  
\$ Allowance \$30. \*\* Has allowance of \$50 for fuel, etc. †† Allowance \$100. ‡‡ Allowance \$200.  
\*\*\* Allowance \$20. †A light-ship is maintained, under contract, at Peninsula Bank, Gaspé Basin.—  
The present contractor is Thomas Kennedy, sr., of Douglastown, Gaspé County.



SESSIONAL PAPER No. 21

Statement giving Names and Stations of Light-keepers, &c.—Continued.

BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Chabot, Edouard.....	Pointe St. Laurent.....	August 1, 1880 ...	300 00
Chiasson, Edward.....	Etang du Nord.....	October 22, 1896.....	350 00
Dubreuil, Hector.....	Pointe aux Trembles .....	February 18, 1897...	130 00
Desmarais, Phileas.....	River St. Francis. ...	July 2, 1897 .....	*20 00
Desjardins, Jean B.....	Kamouraska.....	August 23, 1887.....	400 00
Duperie, Alfred J.....	Pointe aux Jones.....	May, 1873.....	40 00
Dubois, Octave.....	Flower Island, Strait of Belle Isle.....	October 14, 1899 ...	500 00
Electric Light Company...	Roberval Beacon Lights (2).....	June, 1898.....	60 00
Fournier, Alfred.....	Upper Traverse .....	April 14, 1900.....	600 00
Fugère, Léandre.....	Batiscan (1) .....	" 19, 1868.....	80 00
Fugère, Napoléon.....	Batiscan (2) .....	January 10, 1887.....	80 00
Fiset, Jean H. ....	Lake St. Peter Light-ship No. 2 .....	April 22, 1875.....	500 00
Francœur, Siméon C .....	St. Pierre les Becquets.....	September 24, 1862..	70 00
Fontaine, Edouard.. ..	Cape Bauld Lighthouse and Fog Alarm....	November 1, 1892...	800 00
Faffard, Victor.....	Pointe de Monts. ....	August 1, 1889.....	†400 00
Fraser, Pierre T.....	Red Island ...	April 12, 1890. ...	‡450 00
Fagot, George.....	Greenly Island Lighthouse and Fog Alarm.	June 30, 1890. ...	800 00
Frenette, A.....	St. Croix Front Range Light.....	February 10, 1900...	70 00
Gervais, Ovilas.....	Contrecoeur (1). ...	March 1, 1877.....	100 00
Giguère, Denis.....	Lavaltrie.....	April 24, 1870. ...	300 00
Galibois, Jean B.....	Bellechasse .....	June 23, 1880.....	320 00
Gauthier, Jean.....	Martin River.....	February 21, 1876...	\$300 00
Goudreault, Jos. M.....	River Caribou .....	—, 1874.....	40 00
Gauthier, Francis.....	Pointe aux Jones.....	April, 1872.....	40 00
Goudreault, Abraham.....	Eboulements Pole Light.....	May 10, 1882.. ...	40 00
Grenier, Solomon.....	Newport. ....	June 3, 1897 .....	120 00
Guyon, Philip.....	Isle aux Prunes .....	March 22, 1898.....	120 00
Houde, Athanase ...	Cape Charles .....	November 4, 1890...	150 00
Hébert, Moïse M.....	Cap de la Madeleine.....	May 11, 1888.. ...	80 00
Harvey, André.....	Chicoutimi Wharf.....	" 30, 1889.....	40 00
Huot, Joseph.....	L'Ange Gardien.....	August 1, 1885 .....	70 00
Heroux, Didié.....	Lake St. Peter Light-ship No. 3 .....	April 13, 1898.....	400 00
Irvine, John.....	Red Island Light-ship.....	March 2, 1900 .....	**500 00
Lafleche, Désiré.....	Lake St. Peter Light-ship No. 1. ....	April 12, 1887.....	400 00
Lachapelle, Jean B. ....	Repentigny (2).....	February 1, 1861.....	75 00
Langlois, Antoine .....	River du Chêne .....	July 11, 1888.....	100 00
Laliberté, Arthur.....	Ste. Emelie, Front Range.....	September 24, 1880..	70 00
Lebel, Esdras .....	Lower Traverse Light-ship.....	April 21, 1900.....	††2,300 00
Leclerc, P. M.....	Ste. Emelie, Back Range.....	April 8, 1899.....	80 00
Lavoie, M.....	St. Fulgence.....	— 1893.....	70 00
Le Huguet, François.....	Gaspé Cape.....	October 22, 1896.....	650 00
Lindsay, Wm.....	Gaspé Wharf.....	June 14, 1900.....	42 00
Lindsay, Irenée.....	Green Island.....	September 25, 1888..	600 00
Loisel, John.....	Point Paspebiac.....	August 27, 1894.....	150 00
Leclerc, A.....	St. Antoine.....	February 6, 1899.....	175 00
LeBlanc, Régis.....	White Island Light-ship.....	January 11, 1878.....	‡‡500 00
Lemieux, Z.....	South-west Point, Anticosti.....	July 19, 1900.. ...	600 00
Lachance, Louis .....	Port of St. John.....	September 26, 1896..	300 00
Lavoie, F.....	Anse St. Jean Wharf.....	— 1889.....	40 00
Moussau, François.....	Port St. Francis.....	March 27, 1900.....	***30 00
Montplaisir, Antoine B ..	Cap de la Madeleine.....	August 6, 1877.....	175 00
Martineau, Valerie.....	Champlain Pole Light.....	" 2, 1889.....	60 00
Mercier, O.....	Isle à la Bague.....	" 31, 1883.....	150 00
Malo, Joseph.....	Isle Ste. Thérèse (1) .....	February 1, 1897.....	130 00
Ménard, Denis.....	North of Halfway Point .....	September, 12, 1890..	170 00
Marchand, Ferdinand.....	Pointe aux Citrouilles. ....	April 27, 1896.....	200 00

\* Per month. † \$200 for attending signal gun, &c. ‡ Allowance, \$50 for fuel, etc.  
 \$ Allowance, \$25. †† Was in charge of Upper Traverse Light-ship from April 13, 1893.  
 \*\* Allowance, \$1,900. ‡‡ Allowance, \$2,300. \*\*\* A month during season of navigation.



64 VICTORIA, A. 1901

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

BETWEEN MONTREAL AND QUEBEC AND BELOW QUEBEC—Continued.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Martin, Paul .....	St. Valentine.....	April 28, 1873.....	150 00
Molson, Mrs. Alexander...	Molson's Island, Lake Memphremagog....	From year to year...	+2 50
Malouin, Alfred .....	Anticosti, West Point.....	July 1, 1877.....	+++450 00
Martin Jule G. ....	Little Metis.....	December 23, 1879 ..	++300 00
Marceau, Louis.....	St. Francis.....	April 1, 1884.....	75 00
Maltais, Eli.....	Murray Bay.....	May 10, 1882.....	50 00
Myrick, John.....	Cape Race, Newfoundland, Lighthouse and Fog Whistle.....	November 1, 1897....	1,000 00
Morin, Hypolite.....	Pilgrims.....	April 29, 1898.....	340 00
Marcotte, P. L. ....	Point Bleue, Lake St. John.....	November 28, 1898..	40 00
McWilliams, John J. ....	Father Point.....	June 1, 1876.....	200 00
McLaren, Donald.....	River du Moulin.....	September 19, 1889..	35 00
Nadeau, Alphonse.....	Anticosti, South Point.....	June 18, 1894.....	800 00
Noel, Edouard.....	Richelieu Light, Lotbinière.....	April 10, 1899.....	150 00
Paquin, Sylva.....	Point du Lac.....	May 2, 1900.....	100 00
Paul, Edouard.....	Isle de Grace.....	September 7, 1871...	*30 00
Pagé, Celestin.....	L'Islet Richelieu.....	January 9, 1895. ....	150 00
Peters, D. E. ....	Witch Rock, Lake Memphremagog. ....	From year to year...	+2 50
Peters, J. H. ....	Green Point.....	" ..	+1 50
Patterson, J. C. ....	Wadleigh.....	" ..	+1 50
Painchaud, Joseph.....	Crane Island.....	October 1, 1864 .....	320 00
Paquet, Pierre.....	St. Famille.....	" 19, 1885.....	70 00
Poitrass, Alexander.....	Bersimis Range Light.....	September 21, 1891..	100 00
Pedneau, Pierre .....	Isle aux Coudres Pole Light.....	April 6, 1896.....	40 00
Poulin, Alfred .....	Ste. Famille.....	" 26, 1898.....	70 00
Pineault, Louis .....	Bicquet Lighthouse & Fog Alarm.....	October 6, 1900.....	700 00
Reeves, Samuel.....	Isle Ste. Thérèse (2).....	" 12, 1870.....	270 00
Rivet, Léon L. ....	Repentigny (1) .....	April 28, 1894.....	75 00
Robinson, George L. ....	Ash and Bloody Islands.....	June 18, 1894.....	200 00
Richard, Alphonse.....	Brandy Pots.....	October 7, 1878.....	400 00
Rennie, E. H. ....	Cape Ray Lighthouse and Fog Whistle....	" 19, 1884 .....	800 00
Roberge, C. Honoré.....	St. Pierre Island.....	" 19, 1885.....	70 00
Rodrique, F. F. ....	Portneuf .....	January 22, 1858.....	250 00
Racette, D. ....	St. Croix back range lights.....	February 10, 1900...	70 00
St. Onge, Thomas.....	Contrecoeur.....	June 14, 1886.....	75 00
Salvail, Omer.....	Isle à la Pierre.....	May 6, 1897.....	220 00
Simard, Edward.....	Montée du Lac, and Cape Rouge Beacons..	October 28, 1870 .....	400 00
Sasseville, F. J. ....	Cape Magdalen, Lighthouse and Fog Whistle	June 9, 1886.....	700 00
Simard, Arthur.....	River Caribou.....	" 9, 1870.....	40 00
Savard, Xavier .....	" .....	May 1, 1873.....	40 00
St. Croix, George.....	Plateau Rock.....	October 22, 1896....	400 00
Trottier, Widow I. ....	Grondines (1).....	August 1, 1872 .....	100 00
Trottier, Ephrem.....	Grondines (2).....	May 17, 1892.....	100 00
Thurber, Wm. ....	Ste. Croix.....	October 5, 1878 .....	175 00
Tremblay, W. T. ....	Goose Cape.....	April 4, 1888.....	250 00
Tremblay, Dorilas .....	Portneuf (2).....	February 18, 1875....	350 00
Tremblay, George.....	River du Moulin.....	September 9, 1889....	35 00
Trudelle, Ambroise.....	L'Ange Gardien.....	October 19, 1885....	70 00
Tremblay, Pitre.....	St. Alphonse Wharf.....	June 19, 1895.....	40 00
Tremblay, Henry.....	Cape l'Aigle Pole Light .....	February 6, 1896 .....	40 00
Tremblay, Thomas.....	Bay St. Paul.....	October 25, 1898 .....	250 00
Tremblay, P. E. ....	Harbour Light Rivière du Loup.....	May 19, 1900.....	70 00
Tremblay, Alexis.....	Heath or East Point, Anticosti.....	July 25, 1900.....	600 00
Vigneau, Placide.....	Perroquet Island .....	September 19, 1892..	600 00
Vézina, Oliver.....	St. Pierre.....	October 28, 1897....	70 00
Whitman, Robert H. ....	Lacolle.....	May 14, 1883.....	150 00
Wheeler, W. ....	Lead Mines, Lake Memphremagog.....	From year to year...	+1 50
Wyatt, Thomas.....	Forteau, Lighthouse and Fog Whistle.....	October 18, 1889.....	++800 00

\*Per month.    +Per week.    ++Allowance \$75.    +++Allowance \$20 for fuel and \$20 for horse.  
+++ Allowance, \$250.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*

## NEW BRUNSWICK.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Arseneau, James.....	Dalhousie.....	June 18, 1894.....	100 00
Archer, Wm.....	North Tracadie.....	November 7, 1872....	275 00
Allain, Joseph.....	Hay Island, Beacon Light .....	May 21, 1895.....	150 00
Balmer, Matthew.....	Oak Point.....	April 27, 1900.....	80 00
Barbour, Jas. G.....	Cape Enrage Lighthouse and Fog Signal... ..	May 11, 1888.....	800 00
Bent, A. W.....	Cape Jourimain or Cape Tormentine... ..	September 15, 1875..	300 00
Blacklock, Fred G.....	Cape Spencer.....	March 5, 1888.....	400 00
Brown, Charles.....	Quaco.....	November 25, 1884..	400 00
Bradshaw, L. B.....	Quaco Fog Alarm.....	September 3, 1887...	400 00
Brune, John David.....	Goose Lake.....	May 11, 1888.....	250 00
Boyd, B. G.....	Spruce Point.....	September 1892.....	120 00
Boudreau, Jos. B.....	Petit Rocher.....	February 26, 1896...	150 00
Blakley, Lawrence.....	Harper's Point.....	September 9, 1887...	75 00
Bellmore, Fredk.....	Dipper Harbour.....	March 12, 1895.....	100 00
Belleveau, Philip T. ....	Folly Point.....	November 29, 1897..	175 00
Cochran, Fredk. M. ....	St. Martin's Wharf, Quaco.....	March 25, 1892 .....	100 00
Clark, Geo. H.....	St. John Harbour.....	October 2, 1893.....	350 00
Conley, John C.....	Beaver Harbour .....	April 2, 1892.....	250 00
Cummings, Geo.....	Campbellton Beacon Light .....	January 1, 1880.....	100 00
Chapman, James.....	Baie du Vin Island.....	July 24, 1882.....	200 00
Crandall, D. H.....	Grays Point, Pole Light.....	April 12, 1900.....	70 00
Carney, John.....	Perry Point.....	September 25, 1900..	80 00
Dixon, Elias C.....	Pea Point.....	November 16, 1898..	250 00
Delaney, John.....	Grant's Beach.....	October 7, 1880.....	125 00
Drake, Jeremiah.....	St. John Signal Station.....	March 24, 1881....	650 00
Dumaresq, Francis X.....	Shippegan .....	November 7, 1872....	280 00
Dalzell, Geo. Y.....	Swallow Tail.....	March 18, 1893.....	400 00
Dutch, John.....	Heron Island .....	" 7, 1875 .....	200 00
Dinsmore, Samuel G.....	Big Duck Island Fog Alarm.....	July 5, 1886.....	550 00
DeGrace, John.....	Indian Point.....	June 4, 1889 .....	150 00
Davidson, Warren P.....	Southern Wolves.....	January 14, 1897....	500 00
Day, W. A.....	Belyea's Point.....	September 20, 1899..	90 00
Egan, Edward.....	Bellonie's Point .....	May 17, 1892.....	100 00
Frawley, Frank.....	Point Lepreau Fog Alarm... ..	June 15, 1898.....	400 00
Flewelling, M.....	Flewelling's Wharf.....	April 12, 1890.....	80 00
Fanjoy, William.....	Fanjoy's Point.....	December 15, 1897..	80 00
Ferguson, W. G.....	South Tracadie Gully. ....	March 23, 1898 .....	150 00
Guptill, S. N.....	Grand Harbour.....	October 24, 1900....	400 00
Gillard, John.....	Point DuChene Range Lights.....	June 13, 1888.....	90 00
Gillespie, David.....	Hillsborough Pier.....	December 31, 1892..	75 00
Gould, Francis T.....	Point Brule Range Lights, Shediac.....	January 13, 1889... } April 3, 1900. .... }	40 00
Hendry, A. M.....	Hendry Farm.....	April 25, 1899. ....	80 00
Hayden, Michael.....	Pokemouche .....	October, 17, 1888....	200 00
Henderson, Arthur.....	Midjic Bluff.....	" 5, 1894.....	200 00
Hamm, Chas. P.....	Musquash.....	January 14, 1879....	*300 00
Helms, Geo.....	Petit Passage Fog Whistle .....	May 5, 1882... ..	†400 00
Hachey, Octave.....	Pokesudie Island.....	July 12, 1881.....	180 00
Hagan, E.....	Ward's Point.....	April 12, 1890.....	80 00
Harvey, W. L.....	Gannet Rock.....	May 20, 1898.....	700 00
Kilpatrick, Joseph.....	Passamaquoddy Bay.....	February 3, 1898....	350 00
Lantaigne, Gervais.. ....	Caraquet Island.....	June 16, 1888.....	200 00
Leblanc, Charles P.....	Cassie's Point .....	May 4, 1872 .....	250 00
Looney, Thos. E.....	Greenhead, St. John River.....	October 14, 1896....	105 00
Mills, George.....	Lower Fox Island .....	June 23, 1897.....	200 00
Morrison, Peter.....	Oak Point.....	" 24, 1882.....	100 00

\* Allowance \$45.

† Allowance \$180.



64 VICTORIA, A. 1901

STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.

NEW BRUNSWICK—Concluded.

Name.	Station.	Appointed.	Salary.	
			\$	cts.
Morrison, Peter, Jr.	Portage Island	July 1, 1892	200	00
Morrison, Duncan	Sheldrake Island	February 25, 1880	300	00
Maillet, D. O.	Indian Point, Buctouche	July 7, 1883	150	00
Moore, Rev. S. C.	Anderson's Hollow	May 14, 1889	100	00
Matheson, R. B.	Newcastle	April 18, 1898	100	00
McLeod, J. H.	Blin Island	October 17, 1900	300	00
McLennan, Kenneth	Escuminac Lighthouse and Fog Whistle	March 7, 1892	750	00
McEwen, David	Middle Island	July 22, 1875	300	00
McIntosh, Chas.	Neguac Range Lights	December 19, 1892	100	00
McBaine, Alex.	Cox's Point	May 6, 1898	80	00
McMonagle, Miles	Oromocto Shoals	" 26, 1891	80	00
McDonald, Whitfield	Musquash Island	June 1, 1888	80	00
McMann, Robert	McMann's Point	September 7, 1876	80	00
McLaughlin, Walter B.	South-west Head	October 29, 1879	500	00
McNeill, Henry H.	Dalhousie Beacon Lights and Douglas Island Light	January 1, 1880	150	00
McConnell, Robert	Miscou Gully	September 9, 1887	100	00
Nevers, George	Jenneg	November 24, 1884	80	00
Nobles, Israel	Belleisle Point	" 23, 1885	80	00
Purvis, David	No Man's Friend	June 2, 1897	80	00
Preston, S.	Preston's Beach	July 11, 1889	125	00
Pendlebury, Wm. J.	St. Andrews	April 10, 1889	250	00
Pickett, Robert E.	Farmer's Point	May 11, 1897	80	00
Parker, Malachi	Mulholland's Point	April 4, 1885	200	00
Palmer, E. B.	Hampstead	November 6, 1900	80	00
Quinton, Wm. M.	Mark's Point	April 12, 1890	120	00
Russell, James R.	Grindstone Island	January 13, 1899	700	00
Ryan, William	Miramichi Light-ship	May 22, 1889	*400	00
Rivers, Robert	Miscou Lighthouse & Fog Whistle	April 24, 1877	800	00
Robinson, John	Neguac Beach	June 30, 1896	150	00
Richard, Peter F.	Richibucto	May 30, 1895	185	00
Robertson, Chas. M.	Robertson's Point	June 30, 1897	80	00
Robertson, Meier	Shediac Island Beacons	December 29, 1873	250	00
Ross, Elijah	Negro Point	March 5, 1878	400	00
Robichaud, Jude	Richibucto Beacon	December 5, 1891	225	00
Robicheau, Henry B.	Dixon Point	June 21, 1884	150	00
Roberty, A.	Belledune	February 5, 1895	160	00
Richards, D. L.	Partridge Id. Lighthouse & Fog Whistle	July 19, 1900	800	00
Sutherland, George A.	Bathurst Harbour	March 20, 1882	†200	00
Seely, Chas. F.	Machias Seal Island Light & Fog Whistle	June 14, 1883	1,000	00
Seely, Neil	Head Harbour Lighthouse and Fog Whistle	May 3, 1882	800	00
Scott, Chas. F.	Stonchaven	July 20, 1885	100	00
Thomas George H.	Point Lepreau	August 29, 1884	400	00
Tatton, George T.	Grand Manan Fog Whistle	October 16, 1886	550	00
True, Geo. Howard	Wilmoth Bluff	September 11, 1899	80	00
Upton, Robert	Bridge's Point	" 11, 1899	80	00
Williston, Wm. W.	Fox Island	May 31, 1873	300	00
Wagner, Richard	Sand Point	June 7, 1883	80	00
Williams, Forrest W.	William's Wharf	May 11, 1897	80	00

NOVA SCOTIA.

Amero, George D.	Pubnico	February 6, 1893	240	00
Amirault, James	Sidney	July 11, 1899	200	00
Amero, Chas. A.	Whitehead Island	November 9, 1897	200	00

\* Allowance \$300.      † Allowance \$10.



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light keepers, &c.—*Continued.*NOVA SCOTIA—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Beaman, Edwin .....	Digby Pier.....	May 29, 1897.....	100 00
Bancroft, Joseph E.....	Brier Island.....	April 19, 1884.....	400 00
Burke, James.....	Main-à-Dieu.....	May 2, 1871.....	300 00
Bonner, George.....	Point Aconi.....	April 18, 1874.....	200 00
Burgess, Watson.....	Port l'Hébert.....	July 26, 1892.....	150 00
Boutillier, R. J.....	Superintendent of Sable Island.....	November 13, 1884.....	*600 00
Bollong, James .....	Pope's Harbour .....	August 6, 1877.....	300 00
Bourgeois, Philip .....	Cheticamp Range Lights.....	May 23, 1898.....	150 00
Baker, Thomas .....	Pease's Island.....	" 19, 1879.....	350 00
Burns, Wm. H.....	Wedge Island.....	April 2, 1892.....	400 00
Brackett, Wm.....	Herring Cove.....	August 28, 1897.....	100 00
Belleveau, John H.....	Belliveau's Cove.....	February 16, 1889.....	80 00
Brownell, Alfred.....	Cold Spring Head .....	May 26, 1891.....	120 00
Brown, James.....	Cranberry Head Fog Alarm .....	June 22, 1898.....	500 00
Buchanan, Angus A.....	Neil's Harbour.....	August 14, 1899.....	150 00
Beck, Henry .....	Terence Bay.....	" 20, 1900.....	100 00
Chiasson, German.....	Caveau Point Range Lights.....	" 20, 1897.....	120 00
Crichton, H. H.....	Crichton's Head .....	May 6, 1874.....	200 00
Crooks, Demas.....	Liscomb .....	October 5, 1894.....	300 00
Connington, Thomas.....	Louisburg Range Lights.....	" 26, 1897.....	150 00
Crowell, John.....	Seal Island Lighthouse and Fog Whistle.....	" 14, 1899.....	800 00
Campbell, Samuel C. ....	St. Paul's Island, Superintendent .....	July 17, 1897.....	†700 00
Campbell, J. O.....	Port Mouton.....	April 29, 1898.....	300 00
Comeau, Louis C.....	Meteghan River Wharf.....	October 12, 1875.....	100 00
Campbell, R. J.....	Red Islands.....	August 28, 1899.....	120 00
Croucher, George A.....	Croucher's Island .....	January 31, 1883.....	300 00
Clough, Daniel.....	Grandique Pole Light .....	July 4, 1884.....	70 00
Clory, Abraham .....	Glasgies Point Pole Light.....	" 25, 1894.....	150 00
Coolin, Joseph.....	Westhaver's Point.....	August 5, 1885.....	250 00
Carey, James.....	Carey's Beach.....	" 18, 1886.....	60 00
Cameron, John .....	Beaver Point .....	September 29, 1896.....	150 00
Crowell, Benjamin S .....	Pagis Island, Port LaTour.....	June 30, 1890.....	150 00
Campbell, John M.....	Engineer Fog Alarm, St. Paul's Island.....	October 26, 1898.....	400 00
Christian, John.....	Betty's Island.....	December 12, 1899.....	500 00
Dunlap, Wm. H.....	Bird Island .....	June 26, 1897.....	400 00
Doane, Isaac.....	Cape Sable.....	July 1, 1871.....	800 00
Duane, Wm.....	Green Island.....	October 30, 1871.....	500 00
Doody, James .....	Meagher's Beach, Lighthouse & Fog Whistle.....	February 19, 1896.....	800 00
Dunn, James M.....	Fort Williams.....	October 26, 1859.....	260 00
Doane, John H.....	Yarmouth Fourchu, Lighthouse & Fog W.....	July 1, 1874.....	800 00
Doane, Joshua.....	Yarmouth Harbour.....	February 23, 1874.....	‡350 00
Doyle, Edward .....	Mabou Range Lights .....	June 14, 1897.....	70 00
D'Entremont, W. H.....	Abbott's Harbour .....	May 22, 1888.....	75 00
Dewis, F. H. P.....	Cape d'Or.....	April 13, 1898.....	500 00
Ellis, Wm. E.....	Annapolis, Pt. Prim or Digby L. H. & F. W.....	March 8, 1875.....	800 00
Early, John .....	Margaretville .....	February 19, 1887.....	230 00
Fowler, James E.....	Apple River Lighthouse and Fog Whistle.....	July 25, 1894.....	700 00
Fisher, Joel W.....	Baccaro or Barrington.....	August 8, 1893.....	400 00
Fulker, Wm. G.....	Devil's Island.....	July 1, 1886.....	420 00
Firth, Charles M.....	Coffin Island, Liverpool .....	June 30, 1880.....	400 00
Foster, Israel C.....	Port Medway.....	October 13, 1892.....	260 00
Foster, Samuel T.....	Port Medway Breakwater.....	February 17, 1899.....	100 00
Foster, Geo. M.....	Port George.....	November 5, 1897.....	100 00
Fraser, John A.....	Callaghan's Island.....	December 31, 1892.....	200 00
Faulker, W. Y.....	Burnt Coat.....	June 22, 1898.....	250 00
Findlay, John H.....	Bull Point .....	December 7, 1899.....	100 00
Giffin, Spencer H.....	Country Harbour.....	September 18, 1883.....	400 00
Gilkie, Henry A.....	Sambro.....	January 8, 1877.....	800 00
Giffin, Ira L.....	Holly Point, Isaac's Harbour .....	April 28, 1894.....	200 00
Goudock, Edward.....	Shelburne Sand Point .....	December 3, 1880.....	280 00

\*With board of self and family.

†Allowance \$1,400.

‡Allowance \$30 per annum for fog bell.



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STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*NOVA SCOTIA—*Continued.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
Gardner, Frederick T....	Brooklyn Pier.....	February 6, 1885....	100 00
Gallant, Patrick.....	Little Loraine.....	January 19, 1900...	50 00
Goodwin, Jas. E.....	Wood's Harbour.....	August 27, 1900....	200 00
Helm, William.....	Flint Island.....	July 31, 1883.....	450 00
Hopkins, Leslie.....	Bon Portage Island.....	October 20, 1897....	350 00
Huntley, Charles.....	Kingsport Pier.....	June 30, 1890.....	100 00
Hensbee, David S.....	Crowe Harbour.....	November 10, 1897..	300 00
Hawley, Matthew.....	South Bay, Ingonish.....	May 13, 1897.....	140 00
Hardy, John.....	Gabarus.....	November 22, 1890..	200 00
Hennesey, W. P.....	Highland Village Pole Light.....	April 6, 1899,.....	25 00
Jackson, David.....	Ingonish Island.....	April 13, 1898.....	300 00
Johnson, Edward.....	Chebucto Head Lighthouse & Fog Whistle.....	May 14, 1872.....	800 00
Joyce, Simon.....	Seal Island Pole Light.....	July 4, 1884.....	100 00
Jamieson, Chas.....	Cape St. Lawrence.....	September 21, 1893..	400 00
Jamieson, Geo. C.....	Cole Harbour Range Lights.....	October 21, 1898....	120 00
Long, Joseph.....	Canso Harbour.....	December 31, 1896...	200 00
Leblanc, Severin.....	Fish Island.....	July 1, 1889.....	250 00
Lowden, David.....	Pictou Harbour Range Lights.....	" 12, 1897.....	150 00
LeVashe, Wm.....	Arichat.....	October 17, 1898....	250 00
Lyons, John W.....	Barrington Light-ship.....	June 18, 1897.....	500 00
Landry, Edward.....	Big Arrow Island.....	February 23, 1897...	200 00
Larkin, Ephraim.....	Shag Harbour, Stoddart's Island.....	March 18, 1896.....	200 00
Livingstone, George S.....	Advocate Harbour.....	May 8, 1884.....	250 00
LeBlanc, Benjamin.....	Tusket, Wedge.....	November 1, 1892....	300 00
Morrison, Charles.....	Amet Island.....	October, 5, 1894.....	320 00
Morrison, M. D.....	Black Rock Point.....	June 8, 1892.....	250 00
Muise, Marcellin.....	Chetichamp.....	November 27, 1896..	300 00
Misner, John E.....	Fort Point.....	May 16, 1896.....	150 00
Moser, Samuel.....	Moser's Island.....	November 6, 1885....	450 00
Mullins, James.....	Mullins Point.....	June 8, 1892.....	250 00
Munro, William.....	Pictou.....	November 22, 1890..	460 00
Murphy, Michael.....	Pomket Island.....	December 18, 1890..	350 00
Mundell, Joseph.....	Sand Point.....	October 18, 1869....	400 00
Martell, John T.....	Scatterie Lighthouse and Fog Whistle.....	July 30, 1897.....	800 00
Murray, John.....	Cape George.....	November 3, 1882....	200 00
Munroe, William L.....	Three Top Island.....	October 28, 1879....	300 00
Mitchell, John W.....	Jeddore Rock.....	September 29, 1882..	400 00
Mitchell, Wm. A.....	Quaker Island.....	February 19, 1896...	300 00
Matheson, Murdoch.....	Whycocomah Pole Light.....	September 11, 1884..	60 00
Morrison, Widow.....	Freestone Pole Light.....	June 5, 1897.....	150 00
Manger, John J.....	Cape LaRonde.....	November, 16, 1898..	300 00
McDonald, Robert.....	Carter's Island.....	January, 1885.....	275 00
McKenzie, R.....	Gull Rock, Carribou Island.....	August 1, 1881.....	300 00
McDonald, Henry S.....	Little Hope Island.....	April 3, 1897.....	500 00
McRae, Roderick.....	Margaree or Sea Wolf Island.....	February 3, 1898....	400 00
McFarlane, Alex.....	Margaree Harbour.....	August 18, 1886....	60 00
McKay, R.....	North Canso.....	February 4, 1882....	350 00
McFarlane, Andrew.....	Pictou Island.....	June 8, 1892.....	400 00
McDonald, John A.....	Port Hood.....	May 10, 1880.....	280 00
McDonald, James.....	Point Tupper.....	March 15, 1870.....	300 00
McAskell, Donald.....	St. Anne's Harbour.....	June 26, 1889.....	140 00
McLean, H.....	Gillis Point.....	December 18, 1897...	120 00
McRae, Hector.....	McKenzie Point, Plaster Harbour.....	August 20, 1890....	160 00
McLeod, Norman.....	Cape North.....	October 14, 1899....	400 00
McRae, Donald.....	Kidston's Island.....	May 17, 1892.....	200 00
McLeod, Angus.....	St. Esprit.....	October, 27, 1880....	400 00
McDonald, Charles L.....	Little Narrows.....	January 17, 1896....	120 00
McDonald, Norman.....	Marjorie's Isle Pole Light.....	July 4, 1884.....	100 00
McAskill, James.....	Jerome Point.....	November 8, 1897...	250 00
McNeil, John C.....	Piper's Cove.....	December 18, 1897...	120 00
McNeil, Laughlin.....	McNeil's Back Pole Light.....	August 6, 1884.....	60 00
McFadyen, M.....	Mabou Range Light.....	April 17, 1891....	50 00
McVickar, Archibald.....	Cow Bay Breakwater.....	July 3, 1896.....	70 00
McDonald, Donald.....	Clark's Harbour Pole Light.....	April 25, 1892....	50 00



## SESSIONAL PAPER No. 21

STATEMENT giving Names and Stations of Light-keepers, &c.—*Continued.*  
NOVA SCOTIA—*Concluded.*

Name.	Station.	Appointed.	Salary.
			\$ cts.
McNeil, John.....	Campbell's Island, Victoria Co.....	May 22, 1900.....	100 00
McEachern, A. L.....	Cape St. George.....	September 8, 1898....	450 00
McLeod, Murdoch.....	Pugwash.....	December 10, 1897....	250 00
McKenna, John L.....	McNutt's Island, Shelburne Harbour L. H. & F. W.....	March 31, 1899.....	800 00
MacIntosh, James.....	Egg Island.....	July 28, 1899.....	500 00
McLellan, Ingersoll L.....	Economy Pole Light.....	May, 16, 1899.....	*6 00
McAdam, Hugh R.....	Arisaig.....	November 14, 1898..	60 00
Nass, Henry.....	Lunenburg.....	March 12, 1897.....	300 00
Nickerson, Byron.....	Negro Island.....	July 26, 1897.....	300 00
Nunn, George.....	Sydney South Bar.....	June 20, 1872.....	300 00
O'Leary, Wm.....	Beaver Island.....	February 22, 1900....	350 00
Orchard, L. D.....	Gull Rock.....	January 1, 1877.....	400 00
Pearl, Albert.....	Green Island.....	December 29, 1873....	500 00
Price, Philip.....	Louisburg.....	November 8, 1897....	350 00
Peters, John G.....	Low Point.....	October 1, 1865.....	460 00
Pettis, William.....	Parrsboro'.....	December 6, 1888....	340 00
Palmer, Howard.....	Wolfe Point.....	October 14, 1899.....	250 00
Palmer, H. W.....	Fort Point.....	May 22, 1878.....	200 00
Perry, John.....	Sheet Harbour.....	December 17, 1878..	500 00
Phinney, Elisha.....	Cape Sharp, Diligent River.....	July 6, 1893.....	250 00
Perry, Levi.....	North East Harbour Range Lights.....	June 17, 1899.....	200 00
Quinn, James.....	Lingan.....	April 13, 1874.....	200 00
Robinson, Charles.....	Black Rock.....	March 16, 1885.....	330 00
Ruggles, H. M.....	Boar's Head.....	December 1, 1864....	425 00
Robicheau, B. H.....	Cape St. Mary's.....	July 5, 1886.....	350 00
Rathburn, S. M.....	Horton Bluff.....	1879.....	250 00
Reid, George J.....	Isle Haute.....	October 18, 1889....	500 00
Ross, Robert.....	George's Island.....	January 18, 1876....	250 00
Robblee, Jacob V.....	Shafner's Point.....	May 29, 1897.....	150 00
Riley, Simon W.....	Annapolis Royal.....	March 7, 1892.....	100 00
Smith, Eph.....	Inner Pole Light Sambro Island.....	January 3, 1900.....	20 00
Sullivan, James.....	Cape Canso, Cranberry Island, L.H.&F.W.	May 23, 1887.....	800 00
Scott, M. C.....	Guysborough.....	April 19, 1884.....	220 00
Swinehammer, George.....	Peggy's Cove Point.....	January 4, 1883.....	350 00
Spencer, Robert A.....	Spencer's Point.....	April 1, 1870.....	125 00
Suthern, Edward W.....	Westport.....	" 12, 1890.....	300 00
Suthern, John F.....	Brier Island Fog Whistle.....	October 1, 1874.....	500 00
Saulnier, John H.....	Church Point.....	August 8, 1878.....	200 00
Sampson, C.....	Ouetique Island.....	December 1, 1874....	350 00
Strum, James A.....	Westhaver Island.....	September 23, 1888..	200 00
Sollows, Walter.....	Green Cove Pole Light.....	August 15, 1884.....	75 00
Sampson, Theodore.....	South Beaver Harbour Pole Light.....	October 15, 1892.....	80 00
Smith, Caleb.....	Salter's Head Beacon Light.....	June 21, 1888.....	60 00
Smith, William B.....	Westhead Barrington.....	April 12, 1890.....	200 00
Simpson, W. H.....	Pictou Custom House Light.....	December 21, 1897....	100 00
Smeltzer, John D.....	Hobson Island.....	April 10, 1900.....	300 00
Vigneau, George.....	Jerseyman's Island.....	March 23, 1883.....	300 00
Vance, George.....	Masstown.....	June 29, 1898.....	25 00
Wolfe, Howard M.....	Ironbound.....	June 22, 1895.....	250 00
Weadon, Burton.....	Walton Harbour.....	May 26, 1891.....	125 00
Wells, James.....	Whitehead.....	October 20, 1897.....	510 00
Winton, Robert B.....	Guion Island.....	April 28, 1877.....	450 00
Wambold, James.....	Sheet Harbour Passage.....	May 11, 1887.....	50 00
Webb, Patrick.....	Harbour-au-Bouche.....	February 19, 1896....	250 00
Webber, James M.....	Torbay.....	May 10, 1898.....	300 00
Wynacht, W. H.....	Cross Island Lighthouse and Fog Whistle..	April 13, 1898.....	800 00
Young, Uriah.....	Chester, Quaker Island.....	February 15, 1884....	400 00

\* Per month during season of navigation.



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STATEMENT giving Names and Stations of Light-keepers, &c.—Continued.  
PRINCE EDWARD ISLAND.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Anderson, Albert.....	St. Peter's Harbour .....	July 25, 1900.....	130 00
Allen, Joel S.....	Indian Point Pier.....	May 18, 1898.....	350 00
Arseneault, F. C.....	Cape Egmont.....	April 20, 1900.. . .	200 00
Champion, Wm.....	Cascumpec Harbour .....	October 25, 1897 ....	80 00
Costain, Frederick.....	Miminegash, Rix Point Range Light .....	May 19, 1897.....	40 00
Fraser, John.....	Summerside Wharf.....	April 12, 1897.....	100 00
Gaudet, Agape.....	Tignish.....	August 30, 1897.....	130 00
Gillis, Donald.....	Point Prim.....	December 10, 1897...	300 00
Hardy, Wm. ....	Little Channel.....	July 26, 1875... . .	100 00
Howatt, Abner J.....	Crapaud Outer Range Light.....	" 22, 1893.....	100 00
Harris, Wm.....	Cape Bear.. . . . .	November 11, 1896..	350 00
Kennedy, Alexander.....	Hazard's Inner Range Light.....	June 27, 1890.....	60 00
Leard, Solomon J.....	Crapaud Inner Range Light.....	May 14, 1889.....	100 00
Lewis, James.....	Brighton Beach Range Lights.....	March 1, 1899.....	100 00
Munn, Duncan.....	Little Sands . . . . .	May 1, 1877.....	30 00
Morrison, Angus .....	Cardigan.....	September 21, 1883..	100 00
McRae, Daniel.....	Hazard's Outer Range Light.....	April 6, 1900.....	70 00
McLaine, Archibald .....	Block House, Charlottetown.....	" 3, 1867.....	*340 00
McDonald, Lauchlin .....	East Point Lighthouse and Fog Whistle...	February 23, 1897...	500 00
McDonald, Wm.....	Pannure Island.....	November 20, 1853..	300 00
McDonald, Chas. Æ ..	St. Andrew's Point Outer Range .....	July 18, 1887.....	125 00
McDonald, John.....	Orwell.....	June 25, 1879.. . .	80 00
McLeod, Jas. H. ....	New London.....	January 29, 1896 . . .	100 00
McDonald, Wm.....	West Point .....	December 1, 1875....	300 00
McKay, John.....	Wood Island.....	September 12, 1898..	250 00
McMillan, Donald.....	Covehead Range Lights .....	October 21, 1893.....	90 00
McDonald, Angus.....	Souris.....	November 13, 1880..	300 00
McDonald, Jas. A.....	Savage Harbour .....	July 11, 1889.. . .	100 00
McLeod, Lemuel.....	Murray Harbour Beach Light.....	December 21, 1897 ..	50 00
McPherson, Daniel W.....	Brush Wharf, Orwell, Range Lights.....	January 13, 1899....	60 00
Oulton, Robert T.....	Savage Island, Cascumpec.....	June 14, 1897.....	80 00
O'Brien, Patrick.....	Miminegash Range Light.....	May 14, 1897.. . . .	60 00
Phee, James.....	North Cape .....	September 4, 1897...	300 00
Penny, Robert.....	Murray Harbour, Penny's Light.....	November 11, 1897..	50 00
Pino, Joseph N.....	North Rustico.....	February 6, 1897....	125 00
Ranaghan, Peter.....	Sea Cow Head.....	April 21, 1873.....	250 00
Ready, Michael.....	Tracadie.....	August, 1867.....	100 00
Robertson, Alfred.....	Annandale Range Lights. ....	October 5, 1898 . . .	100 00
Sinclair, Wm.....	Fish Island.....	March 8, 1897.....	250 00
Stewart, Geo.....	Summerside Harbour Back Range Light...	September 5, 1895...	80 00
Tuplin, Jas. C.....	Sandy Island, Cascumpec.....	May 5, 1897.....	250 00
Taylor, Chas.....	Darnley Basin Range Lights.....	June 14, 1897.....	60 00
Taylor, James W.....	St. Peter's Island.....	May 1, 1897.....	200 00
Westaway, Roger D .....	St. Andrew's Point Inner Range.. . . .	May 19, 1883.....	125 00
Wiggins, G. W. J.....	Darnley Point Range Lights.....	October 16, 1896.....	100 00
Wright, Chas. L.....	Wright's Range Light, Crapaud.....	June 14, 1894. . . .	100 00

\* Allowance \$40 for signalling vessels.



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STATEMENT giving Names and Stations of Light-keepers, &c.—*Concluded.*

BRITISH COLUMBIA.

Name.	Station.	Appointed.	Salary.
			\$ cts.
Brinn, Richard.....	Discovery Island Lighthouse & Fog Whistle	June 14, 1886.. ..	900 00
Carpenter, C.....	Dryad Point Light.....	November 7, 1899...	180 00
Crozier, James.....	Bare Point, Chemainus.....	June 12, 1897.....	120 00
Clark, M. G.....	Entrance Island Lighthouse & Fog Whistle	November 26, 1897..	900 00
Codville, James. ....	Pointer Island.....	July 11, 1900.....	360 00
Daykin, William P.....	Carmanah Point Lighthouse & Fog Whistle	November 4, 1890 ..	1,200 00
Davidson, John.....	Cape Mudge.....	June 27, 1898...	360 00
Davies, John.....	Fiddle Reef, Victoria.....	December 2, 1898....	*25 00
Deacon, Andrew.....	Fisgard.....	April 10, 1900. ....	500 00
Eastwood, F. M.....	Race Rocks.....	January 31, 1891....	1,200 00
Erwin, Walter.....	Point Atkinson Lighthouse & Fog Whistle.	October 5, 1880 .....	1,000 00
Forsythe, James.....	Ivory Island .....	September 5, 1900...	500 00
Georgeson, Henry.....	Plumber Pass Lighthouse & Fog Whistle..	July 21, 1884.. ....	900 00
Georgeson, James.....	Saturna Island, East Point .....	October 26, 1889.....	500 00
Grove, John.....	Prospect Point.....	June 21, 1898.....	300 00
Gallup, J. W.....	Balfour.....	March 1900.....	*20 00
Harrison, S. G.....	Beren's Island.....	November 4, 1897...	300 00
Harvey, Thos. W.....	Sands Head .....	April 13, 1898.....	900 00
Higgins, Harry. ....	Sister's Rock, Vancouver.....	October 1, 1899 .....	500 00
Jones, William D.....	Brockton Point, Burrard Inlet.....	August 20, 1890.....	300 00
McDonagh, William. .	Yellow Island.....	September 16, 1898..	500 00
McColl, Wm.....	Garry Point.....	August 4, 1898.....	*10 00
Patterson, Thomas... ..	Cape Beale.....	March 2, 1895.....	†500 00
Richards n, John.. ..	Portlock Point Lighthouse & Fog Alarm..	December 2, 1895....	460 00
Scarlett, Robert . ...	Egg Island.....	August 22, 1900.....	500 00

\* Per month.    † Allowance, \$700.



APPENDIX No. 13.

BOARD OF EXAMINERS OF MASTERS AND MATES.

HALIFAX, N.S., November 30, 1900.

SIR,—I have the honour to submit, for the information of the Honourable the Minister of Marine and Fisheries, my annual report of the proceedings of the Board of Examiners of Masters and Mates, from June 30, 1899, to June 30, 1900, the end of the fiscal year.

The Board met for the purpose of examining candidates, who were applying for sea-going certificates of competency, at the following ports:—

At the port of Halifax.....	13 times.
“ “ St. John.....	6 “
“ “ Yarmouth.....	3 “
“ “ Quebec.....	0 “
Total.....	22 times.

Five examinations were also held before the local examiner at Victoria, B.C., the papers and nautical problems being supplied by me and returned to this office for inspection and approval.

Some officers, desirous of obtaining coasting and inland certificates, also presented themselves for examination at the above named ports of Halifax and St. John, and were duly examined at the monthly examinations.

At Halifax, 9 applications were made for sea-going certificates of competency as master, and 11 for master for coasting and inland waters; 8 sea-going masters and 8 masters for coasting and inland waters received certificates. 14 applications were made for sea-going certificates of competency as mate, and 3 for coasting; 11 sea-going, and 3 coasting mates received certificates.

At St. John 6 applications were made for sea-going certificates of competency as master, and 5 for master coasting; 4 sea-going and 3 coasting masters received certificates. 7 applications were made for sea-going certificates as mate and 3 for mates of coasting and inland waters; 7 sea-going and 1 coasting mate received certificates.

At Yarmouth 3 applications were made for sea-going certificates as mates and 1 for mate; 2 masters and 1 mate were granted certificates.

At Quebec no candidates applied for examination during the past year.

At Victoria, 1 application was made for a master's certificate sea-going, and 5 for mates' certificates, and all were successful.

It can therefore be seen that 19 applications were made for masters' certificates of competency sea-going, and 27 for mates' during the year; 15 masters and 24 mates received certificates; also 16 applications for certificates as master competency coasting and inland waters, were made to the Board of Examiners, and 6 for mates' certificates; 11 masters and 4 mates received certificates.

Three certificates of service were issued through the Halifax office for master coasting, and 1 renewal certificate.

The total number of certificates issued by the Department of Marine and Fisheries, during the past fiscal year, including competency, service and renewal, upon applications made to the Board of Examiners at Halifax, was 58, and fees to the amount of \$715.50 were collected and deposited to the credit of the Receiver General.



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Amongst the applicants enumerated above, some have presented themselves a second or third time for examination, having previously failed to pass. A second trial, however, is allowed any candidate without an extra fee being charged.

At St. John, the local member of the board formerly held examinations for certificates for coasting and inland waters, and this officer made his returns direct to the department up to the time of his death in October, 1899.

At Yarmouth, examinations for certificates for coasting and inland waters, are conducted by an examiner, who also instructs the candidates for these examinations as well as those who desire to present themselves before the board for sea-going certificates, and reports direct to the department, similar to the examiners of coasting officers at the other ports.

In my last annual report, I stated it was desirable that the standard of examination to test the qualifications of applicants for certificates of competency as masters or mates in the coasting trade, should be raised at as early a date as possible, and acting upon instructions from the department, I drafted a new set of rules and regulations for these examinations.

Having given serious consideration to the subject of officers holding coasting certificates under the very slight qualifications required by the present regulations, I desire most respectfully to bring the matter before the department again and at the same time strongly urge upon its notice that life and property may at any time be jeopardised if things continue in their present state.

I am of opinion, based upon a long career afloat, that masters and officers trading between ports in Canada and in the West India Islands and South America, should possess the same professional knowledge and qualifications as officers making voyages across the Atlantic Ocean.

Indeed the passage to and from the West Indies made partly out of sight of land, and often very near the shore, amongst shoals, reef, and irregular currents, the navigation being necessarily intricate and dangerous, demands even greater nautical skill than a voyage across the Atlantic. In the latter case an offing is gained in a few hours after leaving Nova Scotia or New Brunswick ports, and the open ocean is then only to be crossed until a landfall is made upon the other side.

By inspecting the rules and regulations for the examination of candidates for certificates of competency coasting, it may be seen that the qualifications are very low, and the note at the end states that 'as the examination of masters and mates is made compulsory, the qualifications have been kept as low as possible, but it is distinctly to be understood that the Minister of Marine and Fisheries may raise the standard from time to time if deemed advisable.'

I may, however say that within the time that I have been in office, the standard has actually been reduced for whereas in former years the master and mate had to work a day's work, find the latitude and longitude by inspection, find the latitude by a meridian altitude of the sun and work a case in parallel sailing, and find the course and distance from one position to another by Mercator sailing. The only problem now required is to find the latitude by a meridian altitude of the sun.

Regarding the examinations of sea-going officers, I have frequently found some of them deficient in their writing and spelling.

The new examination prescribed for a second mate of sea-going vessel, requires that his hand writing and spelling should be tested by a quarter of an hour's dictation; the spelling must be reasonably and fairly good, and the writing clear and legible.

In the Imperial rules, where there is any doubt about the ability of a candidate to spell correctly, he must be specially tested by dictation, and we are guided by those rules.

Some officers who have been examined for master's sea-going certificates, have not been well acquainted with the deviascope, and have had much difficulty in describing the meaning of the co-efficients, which represent the magnetic character of the ship.

Few appear to understand the necessity of making themselves familiar with the methods adopted for correcting the semi-circular deviation produced by the ship's polar magnetic force, by the use of permanent magnets.



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The increase of the number of ships being built of iron and steel, and the large amount of iron now used in the interior fittings of vessels, more especially in passenger steamers, renders it necessary that officers serving in those ships should have as fair a knowledge of the deviation of the compass as the officers who are examined in Great Britain.

Masters of large passenger steamers in our own coasting trade should likewise be required to pass an examination in compass deviation, but this is not embodied in the rules for the work they have to perform.

During the past year, I had to inform you of the death of the late Captain William Thomas, assistant examiner at St. John, and also that of Mr. B. A. Stammers, formerly instructor of navigation at that port.

The loss of Mr. Stammers was very serious, as he always took a deep interest in giving proper instructions to those candidates who were preparing for examination, and kept himself up to all the requirements,

For some time after the death of these gentlemen, we had no one to take their places, and the port of St. John was left without either an instructor or examiner.

Recently Captain Rufus C. Cole, a master mariner of experience, has taken over the duties of instructor, but no one has been appointed as an examiner.

Some months since an officer was sent to be examined before the board at Halifax, for that position, but he failed to pass the requisite examination.

I consider that it will be difficult for the department to obtain the services of a gentleman who is prepared to conduct these examinations, as many retired masters of ships, although being thoroughly capable men having had long experience, do not attempt to keep themselves up to the knowledge which it is necessary to have to examine candidates, nor do they generally acquaint themselves with the changes made in the problems and other nautical work introduced from time to time by the Imperial Board of Trade.

The new examination is entirely different and much more difficult than was required of them when they passed the board.

Our examinations being similar to those held in Great Britain, the problems are sent out to Canada by the British Government for that purpose and any new subject proposed for examination in England, has to be adopted by the board of examiners here.

This being the case (and it would not be fair otherwise), certificates issued by the Hon. Minister of Marine and Fisheries, after an examination before a board of examiners at any of our ports, have the same value as those which are obtained in Great Britain.

The certificates only require to be stamped with the seal of any mercantile marine office in any British or Irish port, and the officer then becomes eligible to serve on board any ship in the British or colonial marine.

I am firmly of opinion that the duties of an examiner and instructor should not be undertaken by the same individual.

In England great stress is laid upon the impropriety of an instructor even appearing upon the premises, for fear that he should by any means have intercourse with the candidates or obtain any information whatever in connection with the problems prepared for examination.

Our own regulations are similar, it being distinctly stated that no instructor shall be allowed upon the premises.

It is in fact contrary to our law and to that in existence in Great Britain, and therefore as our procedure is regulated by that in force under the Imperial Board of Trade, I submit that it is necessary for our rules to be wholly in accordance with those issued by that body.

Under these circumstances it would appear that the Department of Marine and Fisheries is debarred from allowing one man to hold the two offices of examiner and instructor, and this salutary principle is adopted in every other profession, either of the law, medical, etc., or in connection with the civil service examinations.

I beg respectfully to recommend that the department abolish the issue of service certificates.

If a man can show proof that he has been at sea prior to January, 1883, he is entitled to receive a certificate of service for either master or mate according to the position he has held.



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Some applicants for these certificates have not been to sea for years and when they take charge of a vessel as master, are compelled to employ a man to navigate her.

With regard to certificates for ferry boat officers, I desire respectfully to suggest that they should be limited to the waters on which the holders thereof intend to ply, and the examination should have special reference to the dangers to be met with in the locality, and if they are taken off the route for any purpose, the officer taking charge of such ferry boat, should be required to pass the requisite examination to qualify him for the particular route the ship is engaged on.

I understand that large excursion parties are carried on board of steamers which are taken off the ferry routes for that purpose, and some of them have only certificates for ferry boats.

I have the honour to be, sir,

Your obedient servant,

W. H. SMITH,  
*Chairman.*

The Deputy Minister of Marine and Fisheries,  
Ottawa.



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## APPENDIX No. 14.

## REWARDS FOR SAVING LIFE.

LIST of persons to whom rewards have been granted by the Government of Canada for the fiscal year ended June 30, 1900, for the gallant and humane services rendered in life-saving from shipwrecked vessels, or by British and Foreign Governments for similar services rendered by Canadian vessels in saving life from shipwrecked British and Foreign vessels for the same period.

Names and Designations of Persons.	Nature of Services rendered.	Date of Services rendered.	Description of Reward.
Capt. S. M. Marsters, master; George Murphy, mate; Karl Karlsen and Harry Blunt, seaman; of the Barque "Avola" of Windsor, N.S.	Services rendered to the shipwrecked crew of the "Hattie May," of Halifax, N.S.	Oct. 3, 1898..	A binocular glass to master, a silver watch to mate and \$10 to each of the seaman.
F. Jacobson, H. C. Brewsters, F. Stanley Spain, Nigel L. Campbell, Thomas Owen and S. Jorgeson, residents of Clayoquot, B.C.	Services in the rescue of five men of the crew of the American Schooner "Hera," which vessel had taken fire in a heavy north-east gale off Clayoquot, B.C., the captain having abandoned the vessel and taken four men and one woman on the only available boat and left the remainder to their fate.	Nov. 27, 1898..	A gold life saving medal to each of the men by the President of the United States.
Capt. Frank Carroll, master of the Schooner "Polar Wave," of Boston, Mass., U.S.	Humane and generous services to the shipwrecked crew of the Schooner "Jersey Lily," of Shelburne, N.S., abandoned at sea.	Jan. 30, 1899..	A gold watch.
Capt. J. J. Pereira, of the Portugeese Barque "Neptuno," of Lisbon, Portugal.	Humane services to the shipwrecked crew of the three-masted Schooner "Delight," of Charlottetown, P.E.I.	Feb. 11, 1899..	A gold watch.
Capt. J. Shekleton, master of the British SS. "Ceuto" of Liverpool, England.	Humane services in the rescue of the shipwrecked crew of the Barque "Madeleine," of Yarmouth, N.S.	Mar. 20, 1899.	A binocular glass.
Commodore John H. Hanan, of the Yacht "Sagamore," of New York, U.S.	Humane and generous services in the rescue of the shipwrecked crew of the Brigantine "Caspian," of Charlottetown, P. E. I., abandoned at sea.	April 14, 1899.	A silver cup.
Thomas Fitzpatrick, Frank Fitzpatrick, George Martin, William Dove and Daniel McLeod, fishermen of Bayfield, N.B.	Humane services rendered in the rescue of the shipwrecked crew of the Schooner "Lady Speedwell," of Halifax, N.S., at Jourimain Island, Cape Tormentine, N.B.	May 10, 1899..	\$10 to each of the fishermen.
Capt. John Gwinn, master of Schooner "Morell," of Charlottetown, P.E.I.	Humane and generous services in the rescue from drowning of a passenger of the "Morell."	June 20, 1900..	A binocular glass.



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List of persons to whom rewards have been granted by the Govt. of Canada—*Continued.*

Names and Designation of Persons.	Nature of Services rendered.	Date of Services rendered.	Description of Reward.
Capt. D. Doxrud, master, John Daddow, chief officer; E. Petersen, boatswain; H. Lorensen, quartermaster; A. Anderson, J. Anderson, R. Kettlesen and M. O'Keefe, seamen; of the SS. "Rhynland," of Antwerp.	Humane and gallant exertions in the rescue of the shipwrecked crew of the "Ida Maud," of Liverpool, N.S.	Oct. 6, 1899...	A binocular glass to master, a gold watch to chief officer, a silver watch to boatswain, and a silver watch to quartermaster, \$10 to each of the four seamen, \$40 in all.
Joseph John Chiasson and his two sons, Joseph and Peter, fishermen, of Island River, Shippegan, N.B.	Bravery in the rescue of a fisherman from drowning off a wrecked boat.	Oct. 7, 1899...	A binocular glass to Mr. Chiasson and \$5 to each of his two sons.
Mr. Patterson, keeper of Cape Beale Light, B.C., and Capt. Walbran, of the Dominion Govt. steamer "Quadra."	Kindly services to the American Schooner "Winona" which was disabled, and bringing the vessel to a safe anchorage.	Nov. 20, 1899..	The thanks of the Department of Marine and Fisheries for the timely assistance rendered by its officers to a vessel under the United States flag.
R. Clark, coxswain; Joseph Crockett, Wm. Smith, James Smith, James Peach, John Peach, George Wisner and John Fritzley, crew of Life Boat at Port Rowan, Ont.	Services in rescue of two men in a fishing boat in the outer bay of Long Point, Ont.	Dec. 5, 1899...	\$1.50 to each man, \$12 in all.



